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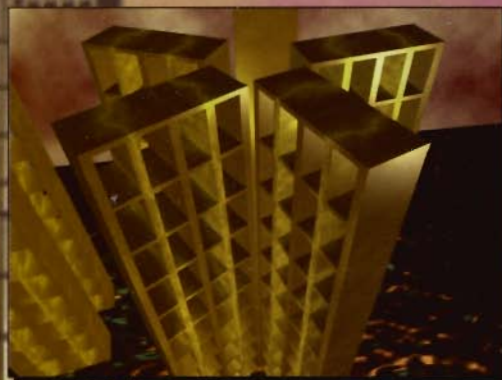
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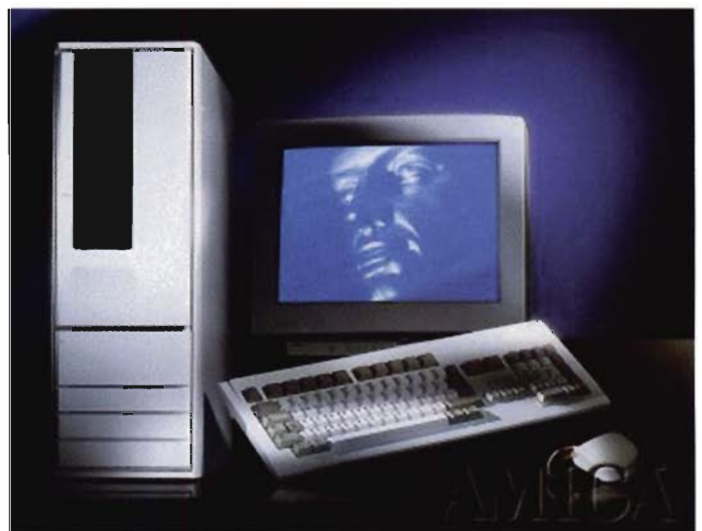
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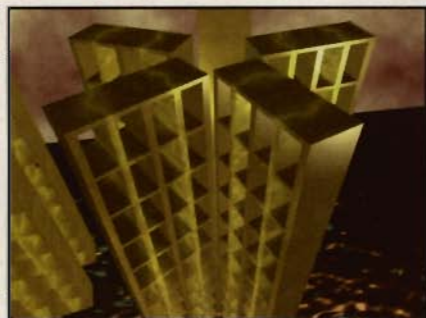
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Need to Upgrade?
Place an IDE?ATAPI CD ROM
on your Amiga—Page 34.



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3D Objects from a wordprocessor, P.14



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What Should the New Amiga OS be?, P.42

9 New Products

& Other neat stuff

New Amiga system packages, Portal finds a new home, Amigas now available by on-line sales, and more!

14 The 3D Table Building

by R. Shamms Mortier

Without realizing it, you have at your disposal some of the most unique development tools for creating 3D objects imaginable: your word processing and painting software.

20 The Gothic Church: Part 3 A Tutorial in Aladdin 4D

by Charles F. Cavanaugh

Mr. Cavanaugh explores a set of tools used to create magical special effects. The tools are gas, wave, flare, and fountain systems all fully integrated into the Aladdin workspace.

27 On Line

by Rob Hays

More Web authoring tools available on-line, plus the latest news on Protal and more!

30 Web Typesetting, Part 9: Frames

by Randy Finch

Frames are the next big thing on your web site. Also, more reader's sites from the web.

34 Using an IDE/ATAPI CD ROM with an Amiga 1200 or A4000

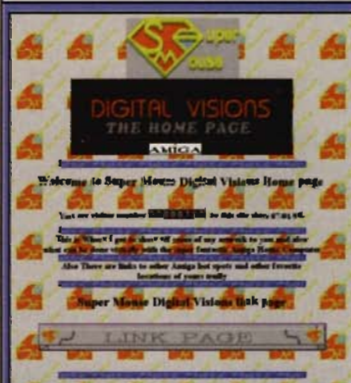
by Dave Matthews

Since IDE supports two devices, if you only have a single hard drive, wouldn't it be nice to use the free IDE port for a CD-ROM?

42 This Old Workbench: Episode 5 Renovation from the ground up!

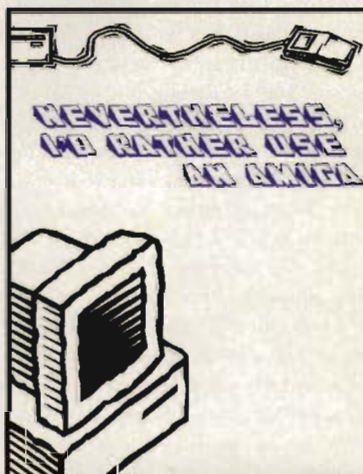
by Dave Matthews

What would you want to see in a new Amiga Operating System?



Web Typesetting Part 9:

More samples of reader's web sites—Page 30.



48 Make It Bleed!

Using Bleed in Page Layouts

by Nick Cook

The technique to print bleed is simple enough, but requires a workaround if the services of a professional print shop are not in the picture. Follow these simple steps and do it yourself!

DEPARTMENTS

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Editorial Content

Amiga Spirit

I thought we had done a good job this month bringing the latest news to print. After all, we have a great conclusion to Charles Cavanaugh's Aladdin 4D series. We have a unique 3D modeling idea from Shamms Mortier. Dave Matthews has not only demonstrated how to attach a CD-ROM drive to your Amiga 1200 or A4000 but he has also raised questions and suggestions on what is possible (or just dreamed about) for the next Amiga Operating System. We even have new packages for the Amiga being announced by the North American Amiga production company, QuikPak, in our New Products column. But, a quick look through the New Products section just now, reminded me that we had forgotten someone.

Mall Marketing

For those of you who have not received faxes or noticed the postings of Dwin Craig, then you may have missed this unique application of the Amiga. Mr. Craig has used his Amigas to start a new business, Mall Marketing.

Mall Marketing uses the Amiga to create advertising screens and animations for clients. These are then shown on monitors and televisions in different areas of a shopping mall. People passing through the mall stop to see the animated advertisements as they scroll past.

Dwin can easily place 20 ads on an Amiga 1200 or A600. He charges each advertiser \$100 per week to appear on the system per location. This means that each of his Amigas can generate \$2,000 per week and more.

Dwin says 20 advertisement sequence plays completely through in about 10 minutes. This way his clients' advertisements are seen in high traffic areas about 432 times per week during an average week. That also means that each client is demonstrating a product, service or their company in color animation to a continually changing audience at just over 23 cents per showing. There is no other advertising medium with the same power.

Mr. Craig also emphasizes that making changes to the advertising sequence and creating new ads is extremely easy. All you need is one Amiga at the office for production and then you download the new ads to the mall Amiga and off it goes.

Next month, we will be sure to have the complete information from Dwin in the New Products section. Until then, if you are interested in Mr. Craig's operation, please contact him at:

Mall Marketing Corp.

Dwin R. Craig

6971 Rooks Ct.

Frederick, MD 21703

FAX 301-698-2676

Dwin has stated that he is starting a franchise operation shortly. I suggest that if you are interested, you should contact him as soon as possible.

The Spirit

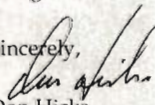
Aside from the obvious fact that Dwin Craig has a good idea, I was also struck by the enthusiasm that he demonstrated. He is retired, but he has plans for taking the Mall Marketing concept to all Amiga owners. He wants as many people as possible in the business environment making money with their Amigas.

Mr. Craig believes that the best way to get exposure for the Amiga is to show it doing something like this to as many people as possible. In the letter I just received from him, he is reminding readers that they can only do this economically with the Amiga.

I am often asked about the future of the Amiga. People want to know what I think will happen if so and so does this or this company does that. The truth is, the future of the Amiga has always been in the hands of its innovative users. From Tim Jenison's Digi-View to Dwin Craig's Mall Marketing, it has been the users that have advanced the Amiga far more than any company or even the Amiga's owners.

As we have seen over the past few years, it is important to have a good company providing support and creating new versions of the Amiga, and VISCORP is aware of this need. But, as it has also been demonstrated from the past few years, the growth and determination of the Amiga market is in the application of this tool and that is completely in the hands of the Amiga users.

Sincerely,


Don Hicks

Managing Editor

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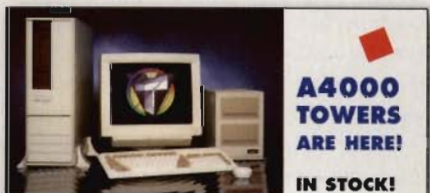
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FEEDBACK

A Little Faith

Dear AC,

I have been a computer enthusiast for a very long time and it seems a little excitement came with every new computer I purchased; but nothing compares with the excitement I felt when the first Amiga came into my life. I ate, slept and lived at my computer! My friends knew that they would be subjected to the praise of this marvelous machine; most were as amazed as I myself. A true multi-tasking computer with so many wonderful applications. The Commodore User's Group I was involved with suddenly found themselves with a fanatic on their hands.

My life was complete and then it happened; Commodore was no more! I mourned its passing and yet I was hopeful that someone would pick up the ball and finally run with it. I read everything I could get my hands on concerning the Amiga computer. I read magazines; including your fine publication! I went live on-line via the internet to keep in touch with the die hards and whatever other source I could find.

During this time I became the President once more of the local Commodore Computers User's Group; I did my best to keep the spirit of the Amiga and other Commodore computers alive. Some losing faith fell; yet others worked even harder.

I heard all the rhetoric; why Commodore failed and what it would take the make the Amiga live again. First let me say the Amiga was never dead so I wish everyone would quit trying to bury it! Many have said the fall was due to lack of advertisement; hog wash! The USA was a weak market; and again hog wash! Two things stand out in my mind; one no product available and two lack of professionalism on Commodore's part in the beginning.

Every dealer I was acquainted with said one thing over and over again, 'nothing to sell'. The Amiga sold itself and anyone could see the advantages of such a machine; but when any semi-technical or even a question of procedure arose the system failed every time. In most cases the user or potential user would have to turn to another source such as AC magazine or local user's group. This was somewhat satisfactory for the personal user but a far cry from the service needed by the professional/business purchaser.

I was somewhat dismayed by the pricing index of Escom but thought it was a small propitiation to put the Amiga back on dealer's shelves. Now that VISCORP has purchased this technology; I can only hope that wisdom prevails in regards to the Amiga platform. No need to compare the Amiga to other platforms; there is no contest any longer! The Amiga computer does what it does and very well I might add. VISCORP has its work cut out; but they will have my support and that of many others... cheerleaders if you will, singing the praises of the Amiga and hoping against hope of VISCORP's great success. Thank you for listening! Keep the faith!

Sincerely,
Patrick King
President FDCUG (Fort Dodge Commodore User's Group)
Fort Dodge IA

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Dear AC,

I found Ralph Hawker's account of the problems he had trying to get his Amiga repaired very depressing; as was the report of the delay in the sale of the company to VISCORP. Hence, I about convinced myself that there was no way I could justify spending anymore money on my flock of Amigas. As coincidence would have it, I spent the next day attending a workshop in a lab filled with Pentium 120 PCs. I left thinking I'd better buy a spare motherboard for my maxed out A3000 and thank goodness I have that option. I cannot begin to convey the frustration of repeated crashes under Windows 95 and the lethargic operation when they did run. The time the class spent waiting for reboots alone caused many participants to quit the training session early.

As an aside, wouldn't it be ironic if Mr. Hawker's entire problem was that the Video Director interface cable really was at fault. Afterall, why should anyone believe being told that the cable was okay when those same people told Mr. Hawker they were going to send him a new one and they didn't?

Thanks. And, stay the course
Amigans, one and all.

Sincerely,
Barlow Soper
Ruston LA

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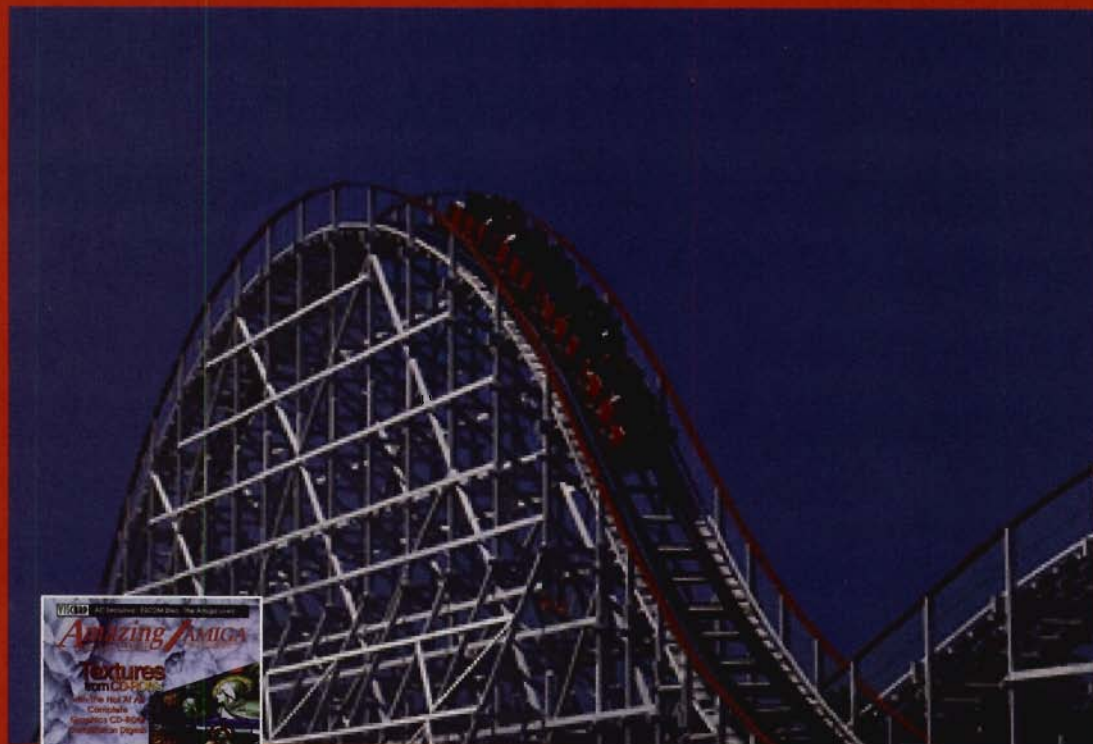
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QuikPak

QuikPak, the North American Distributor of the Amiga, has announced several new products. QuikPak has also announced new Amiga pricing: \$1997 for an A4000T-540MB/6MB, \$2699 for an A4060T-540MB/6MB, \$3249 for an A4060T-2GB 18MB 6X-CD, or \$3999 for an A4060T-4GB 34MB 8X-CD. The Amiga Internet Kit with Netcom, which is included with every system, is selling for \$29.95. You can order through your local Amiga dealer, your favorite mail order distributor or through QuikPak Direct at their toll free number 1-888-QuikPak.

QuikPak, 1000 Forge Ave, Norristown, PA 19403, Phone: 610-666-8080 or Fax: 610-666-8086.

A Change in AmigaZone

AmigaZone, formerly found online on Portal, has announced that they have shut down and moved. The Amiga Zone & Full Internet Access is now on CalWeb, a full service dialup online Amiga resource. Proponents claim CalWeb is an easy to learn menued system with built-in help and it is professionally maintained. With it, you can access over 20,000 Amiga files in 100 libraries and 1100 Fish disks and other disk collections.

Features include Batch Zmodem transfers, Amiga vendors, live, nightly chats and contests, message bases and

The press releases and news announcements in New Products are from Amiga vendors and others. While Amazing Computing maintains the right to edit these articles, the statements, etc. made in these reports are those of the vendors and not Amazing Computing.

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Frankenstein Software

Frankenstein Software has announced that their distributor, RAW Entertainment, has discontinued operations in the US for a limited time (until March 30, 1997). Frankenstein Software is now offering the following titles directly for VISCORP Amigas (all orders require \$5.00 shipping and handling and 8% tax for NY State residents, all domestic and overseas orders are shipped via US Priority Mail with prices and specifications subject to change). For Order Forms, simply download any of the screenshot files.

PowerFootball - For screenshots, see file "FOOTBALL.LHA" in AmigaUser Forum, lib 7 CompuServe. This is a strategy/arcade solitaire (American) football simulation in which the user can design plays and then attempt to execute them on the field. It is a compact, mouse-controlled game with arcade-style graphics and 8 way scrolling which also features advanced artificial intelligence for the computer coach and for each player position. System requirements are ALL Amigas with AmigaDOS 1.3 or higher and at least 512K free disk space. It can run from floppy (via autoboot or Workbench) or hard disk (installer included). PowerFootball is available at \$19.99.

Mongol Commander - For screenshots, see file "MONGOL.LHA" in AmigaUser Forum, lib 7 CompuServe. At 12MB disk space and 4MB RAM, Mongol Commander is a high-end simulation of the campaigns of Genghis Khan and the Mongols (1206-1405) in Eurasia. It features an operational level game that uses a zoom-down mode with scaling bitmap animation on a fractal landscape for combat resolution. Mongol Commander also features a real-world logistical system based on animal physiology and 13th century ecological conditions. System requirements are a 68030 (or faster) CPU, AmigaDOS 1.3 or higher, 4MB RAM (1MB CHIP RAM), and 12MB of hard disk space (installer included). Price is \$49.99.

Bravo Romeo Delta Version 3.0 - For screenshots, see file "NUKEWAR.LHA" in AmigaUser Forum, lib 7. This is a real-time, global scale, menu-driven simulation of a hypothetical limited nuclear war in 1992. Users can seize command of either the strategic nuclear forces of the US or Soviet Union. Version 3.0 features optimized simulators, allowing realtime (no more pauses) simulation of attacks with as much as 2,000 warheads, as well as background stereo sound effects. It can be run on all Amigas with AmigaDOS 1.3 or higher and at least 1MB RAM and 2MB free disk space. It can run from floppy (via autoboot or Workbench) or hard disk (installer included). Bravo Romeo Delta is now available at \$39.99.

Frankenstein Software, P O Box 138, New York, NY 10116-0138, Email: 71175,1676@CompuServe.com, Tel: 516-538-6420 (7pm-11pm EST), 24 HR Fax Server: 612-397-9675 (Orders).

For our UK Readers: Weird Science Ltd.

Weird Science is continuing their commitment to the Amiga computer with a new CD-ROM release for helping Amiga users to get connected to the Internet. In-To-The-Net contains all the software requirements to get an Amiga user connected to the Internet and surfing the World Wide Web. The CD

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concentrates on ease of use and provides plenty of information on the Internet. Additionally there is a bonus free CD included called Out-Of-The-Net which contains whole WWW sites for off-line browsing, providing a way of testing the WWW out before taking the plunge. Two CDs for only £19.95.

Weird Science has also announced that they have just been appointed as exclusive importer of all GTI and Schatztruhe products for the UK market. These products include the Aminet range of products. The products will continue to be available through all the usual UK distribution channels and Weird Science will be working closely with all its trade distributors, to provide the best information and products for the Amiga world. The new enhanced partnership between GTI and Weird Science will provide more of the great titles from Germany to be readily available in the UK.

The latest new release is **Aminet 14**, available October 7th for £14.99, with its focus on business software including a full version of Turbo Calc 2.1. Aminet 15 is scheduled for release November 1996 and Aminet 16 releasing in December 1996.

Also available now is the **Amiga Repair Kit**, £49.95, which contains the essential tools to rescue that crashed hard drive or lost file. The **Amiga System Booster** is ready now for £19.95. This CD enables users to really make the most of their computers with a collection of tools to push the capabilities of the Amiga to the limits. Included are a vast collection of screen blankers, mouse tools & other commodities, backup software, file management, cache programs to optimistic system performance, data recovery, CD-ROM utilities, virus killers and more.

Euro CD Volume 1 contains a variety of programs in the Aminet mold. This CD differentiates itself by having the contents ready to run without de-archiving. The CD comes from Holland and tries to provide a different set of files to those available elsewhere. Full English documentation and menus all for £11.99.

Finally Weird Science has been appointed the exclusive UK distributor for Graphic Detail, USA. Graphic Detail is responsible for the Light Rom series of compact discs. Currently the range consists of Light Rom 3, Dem Rom, Imagine PD 3D, 3,000 Jpeg Textures and Multimedia Backdrops. November will see the exciting release of Light Rom 4 with a whole new batch of objects for Lightwave for the Amiga, Mac, Windows and NT machines. At this time Light Rom Gold will also be released which features the very best objects from Light Rom 1, 2 & 3.

Weird Science Ltd., 1 Rowlandson Close, Leicester, UK LE4 2SE, Tel 0116 234 0682, Fax 0116 235 0045, email support@weirdscience.co.uk

•AC•

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The 3D Table-Building

by R. Shamms Mortier

Without realizing it, you have at your disposal some of the most unique development tools for creating 3D objects imaginable: your word processing and painting software.

"All the world's a 3D stage, and every element a possible actor upon it". Perhaps Shakespeare would have written his famous quote this way, if only he had lived to witness the development of 3D virtual reality worlds. Let's face it, unknown thousands (millions?) of creative people spend endless hours in front of a computer screen, creating their own versions of reality with 3D software tools. Most of the individuals that do this have little interest in becoming employed in the industrial or broadcast workplace as a recognized 3D genius, but are content to share their creations with their peers and friends.

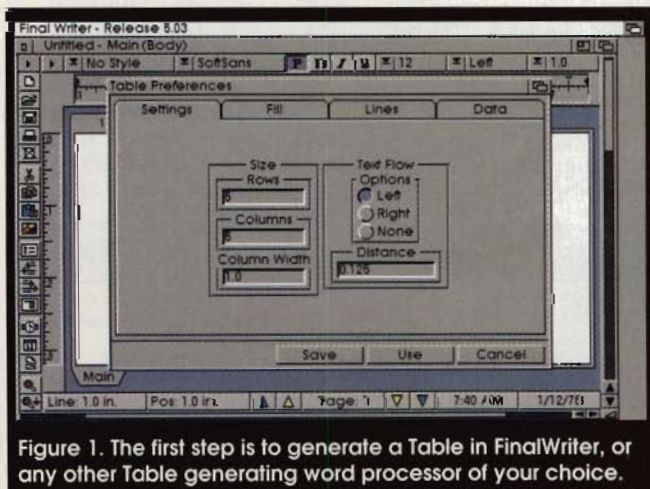


Figure 1. The first step is to generate a Table in FinalWriter, or any other Table generating word processor of your choice.

They do this through the exchange of disks with saved files, or through an interchange of videotapes that display art and animations they have spent long hours producing. The Amiga community is especially blessed with creative 3D adventurers, always looking for a new 3D twist to explore.

When it comes to placing 3D objects on a digital stage, it is commonly thought that there are just two options. The first is to sculpt your own 3D object, and the second is to use 3D objects developed by someone else. To sculpt your own, you have to master extrusion, lathing, and gluing or combining an object's parts in whatever 3D software you use. Though the tools for this differ somewhat among all applications, they are similar enough so that once you get the hang of it you can pretty well master similar processes in any 3D application.

As for using models someone else has developed, these usually reside in libraries that came with your 3D software or objects you purchased (or downloaded) from another location. There are thousands of 3D models available on the Web alone, and these are free except for the cost that your ISP (Internet Service Provider) charges you for the monthly pleasure. Models of every type can also be bought from a large number of developers who do nothing but sculpt them for you all day. But are the choices for adding 3D models to your library limited to these two options alone? Not really.

Your Trusty WordProcessor and Paint Programs

Without realizing it, you have at your disposal some of the most unique development tools for creating 3D objects imaginable: your word processing and painting software. There are some other tools you will need in order to get your creations in the proper format so that your 3D software can interpret the results, but the main creative work can be accomplished in your word processing and bitmap painting software.

We are going to dwell on your word processor here, as I am sure you will be able to incorporate graphics from your paint programs once you get the drift of what we are doing. Besides, a word processing program seems to be the least connected to 3D design, so we will use this farthest removed source to demonstrate some creative alternatives.

Looking for a Bridge

Now think a moment. What items or attributes are shared by both a word processor and a 3D application? Give up? The answer is "text". A word processor uses alphanumeric groups of objects, usually going under the name of a Font family. These objects are written to the screen as you press the keys on your keypad. They come in various flavors—TrueType, PostScript, and other formats.

A 3D program can import certain 3D object formats as well. Common to both is the PostScript format, and sometimes the EPS (Encapsulated PostScript) format. So if you save a file in your word processor in PostScript, you should be able to import it into a suitable 3D application, right? Well, not exactly.

First, not many 3D applications read PostScript text files, though some allow EPS imports. Word processors, however, do not write out EPS files. That is the prerogative of vector drawing software (which we could also add to our actors here if we wanted to). The Amiga especially needs something to bridge the gap, a translator that can transform A into B so that the targeted 3D application can digest it.

The Bridge

Though we have some choices here, the best bridge that I have ever come across for this task is PixelPro from Axiom Software. Axiom Software no longer exists as such (at least Scott Thede, the head of Axiom, is working on other non-Amiga projects while waiting to see what the Amiga is up to). But that doesn't matter. If you don't own PixelPro 2,



Figure 2. The resulting Table might look something like this.

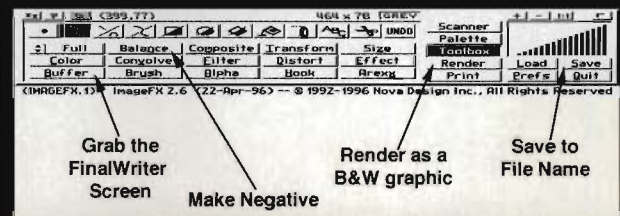


Figure 3. ImageFX is a vital part of this procedure, allowing you to translate the grabbed image into a B&W graphic.

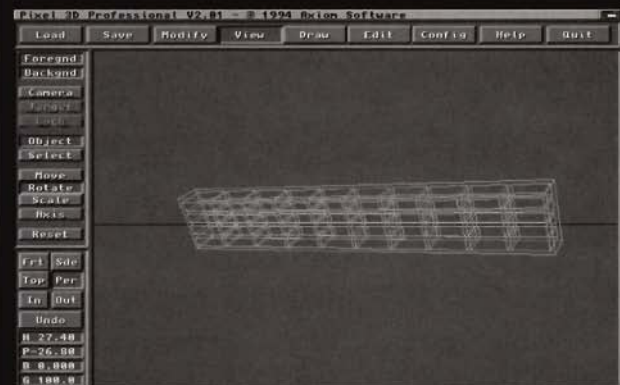


Figure 4. Once imported into PixelPro, the Table graphic becomes an object with discernible depth and volume.

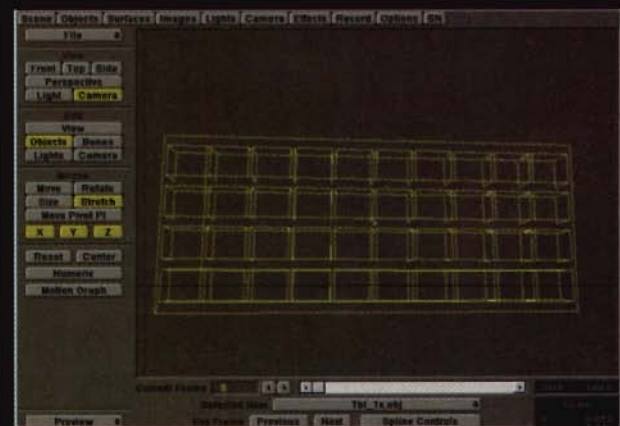
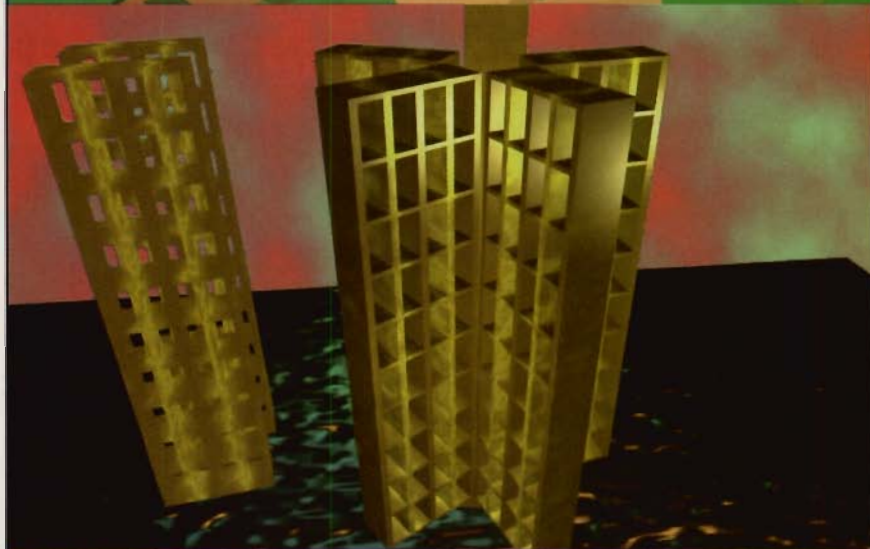
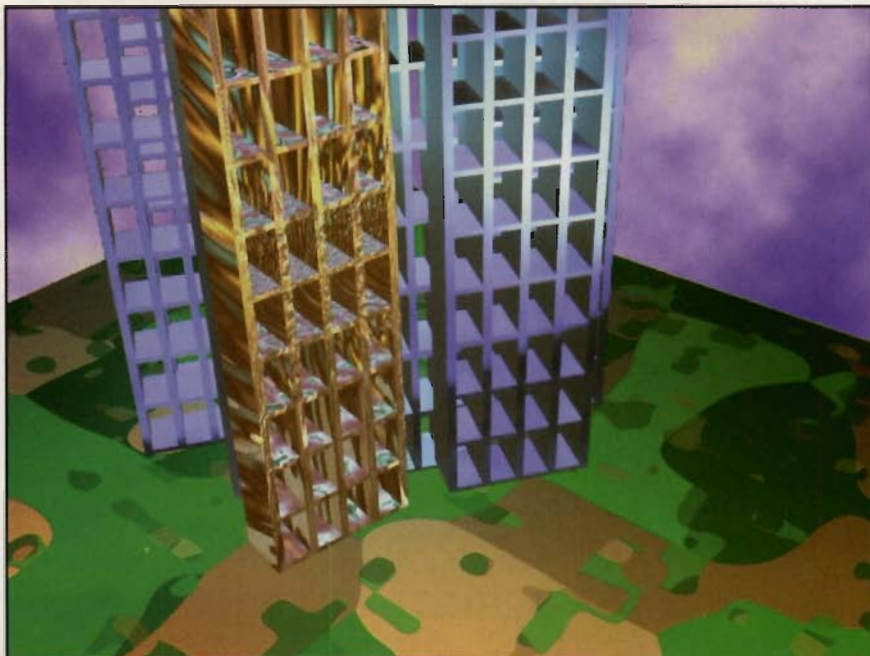


Figure 5. When saved as a LightWave object and exported for rendering, the graphic that started as a Table has a whole new personality to play with.



Figures 6A to 6C (Left top to bottom) and Figure 6D (opposite page—right). A new virtual city springs up where once a humble word processor Table stood.

you can still purchase it at any vendor that stocks Amiga software, and at a great price as well.

The magic of PixelPro in this exercise is this: PixelPro can take in an IFF graphic and translate it into a 3D object. It will do this with any IFF graphic, although we will remain close to our present topic here to show you how to use your word processor as a graphics engine in this regard.

Tables as more than Tables

Let's start with your word processor, and generate a special graphic form, a table. At present, the best Amiga word processor for this task is FinalWriter from SoftWood, since the latest version allows you to configure Tables and place them on the screen in seconds.

Why are we interested in Tables? Tables are forms that can be generated with even sides and perfectly symmetric contents. Your choice of any number of Rows and Columns are automatically generated so that everything is in perfect squared-off balance.

If you have ever tried to generate this type of form in a 3D program by hand, you recognize how difficult the process can be. Everything has to be aligned and glued exactly, and the precision can be maddening. So in this case, we will use a process that can easily be accomplished in one piece of software to act as a basis for a process in another unlike application that will produce the final result.

Here is the software you need to follow through on this project outlined below, although you can substitute any other software that is capable of doing what is needed: FinalWriter version 5, ImageFX version 2.x, PixelPro 2, and LightWave (any version). You will also need at least 16MB of RAM (more is better) so that you can run some of these programs at

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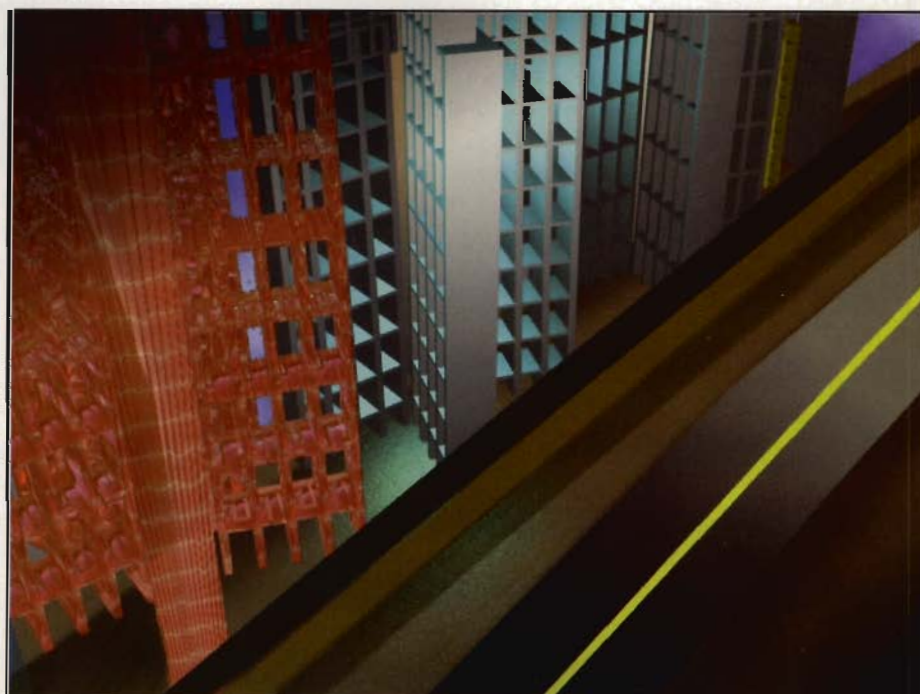
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the same time, and it would helpful if you are running an Amiga 4000/40 as well.

(You don't have this? Well, be an Amigan and use the tools you have in smaller steps. Remember, it is the idea and the process that we are discovering, the application can take many different forms—ED.)

Step by Step

1. Open FinalWriter. Version 5 has a brand new Table generator, and it is one of the best I have seen on any platform. Go to Table/Create in the menu bar. A requester comes up that allows you to input the necessary data. Under the Settings Tab, input 10 columns and 5 rows, and make the dimension read .75 inches



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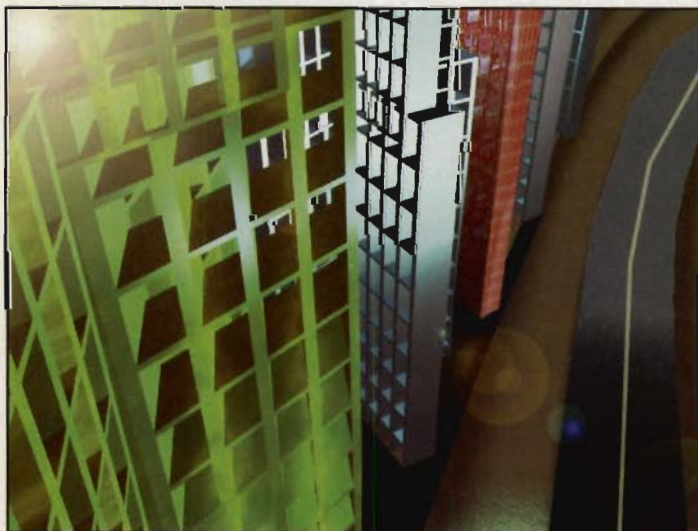
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(this really won't matter much, because we will change the dimension in LightWave later). Go to the Lines Tab, and change Interior, First Row, and First Column Weight to 4 points. We need some thickness to make the object read right later on. Select "USE", and generate the Table on the screen.

2. Open ImageFX with FinalWriter still open and showing the newly created Table. In ImageFX, go to the Buffer item and click on it, selecting the Grab Screen option. Grab the FinalWriter screen, which should be displaying the new Table. Go to the Crop function in ImageFX, and crop the grab so that all you have left is the new Table. Render the Table as a simple 2 color black and white graphic (very important). After it is rendered, go to the Toolbox/Color button, and select Negative. The reason for doing this will soon become apparent. Notice that you have created a negative image of the table, so that what was black, the outlines, are now white, and vice-versa. Render it as a two color graphic again, and save it out as a Rendered IFF (not as a 24 bit file!). You can now quit both FinalWriter and ImageFX.



3. Open Pixel Pro 2. Now here's the reason we had to make a negative of the Table graphic. Pixel Pro translates the Black color of an imported IFF image into a background, while it reads the white as the part of an image that can receive 3D alterations. This is because Black is usually the background color. But no matter what you think of this, or how you might love to criticize it, that's the way it is. The only images Pixel Pro will allow you to translate to 3D basics as far as IFFs are concerned are two color black and whites.

Go to the LOAD button, find the Table graphic, and bring it into Pixel Pro. Once you do this, select the Table as the active graphic. Go to the Modify menu choice, and select "Extrude". Choose "Selected Polygons", and set the extrude number to 30 (you can experiment with this number later). When the object is extruded, it will look like the Table has depth, making the "holes" formed by the rows and columns appear like recesses in a solid rectangular form. Save the object out as a LightWave Object File. PixPro allows you other choices, so if you plan to use a non-LightWave 3D renderer, select one that fits. Caution! Do not select the Draw4D and Aladdin save options as they are dysfunctional with later versions of that software. You can save the object as a VideoScape ASCII file to export to Aladdin 4D. Save the object out as six different file names.

4. Open LightWave or your favorite 3D renderer. Find the Table object #1, and import it. Alter its dimensions by using the Stretch command, and place it on a plane as a standing building. Import the other Table saves and do the same, making each one a little different. Place the objects so that they form an interesting composition in LightWave's 3D world. Texture a ground and sky to your liking, and place a surface on each Table (now "Building") object so that the result is an interesting overall arrangement.

You can either render the results as a picture or bravely configure an animation. You will be able to fly through the "Windows" of each Building. A further step might be to add a 60% transparent surface to each face of the Building, so that there is some appearance of an enclosed space. You might even set the planes that form these walls to be inset a bit, so that it appears you have frames on the windows. Render and enjoy!

We will use this same procedure in later issues of *Amazing* to walk you through ever more intriguing compositions for your 3D worlds. With the right translation software, you can even save out the results as VRML interactive worlds for the Web. Till then, enjoy! See you in ROMulan Space.

•AC•

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The Gothic Church: Part 3

A Tutorial in Aladdin 4D

by Charles F. Cavanaugh

Special Effects

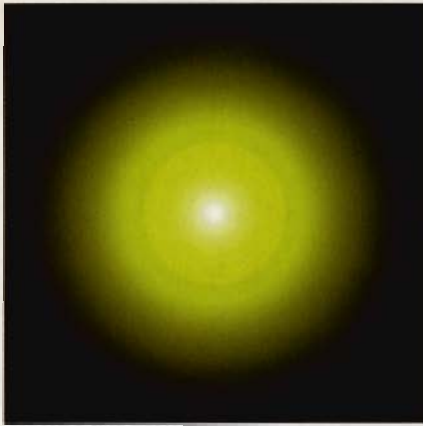
Mr. Cavanaugh shows us how to produce Stained Glass windows to rival the masters.



This image exemplifies the "mechanical Wave" effect in Aladdin. The altar cloth has rippling folds like a curtain or drape.

The beauty of Aladdin 4D lies in the depth of its tools and the profound sensation it gives the artist of being truly immersed in a 4 dimensional universe (the fourth dimension is time—as in animation). In the last two installments of this series, I explained some of the basic 3D work involved in creating a Gothic Church. This material is fairly standard for any 3D package: one needs to create models and scenes, and then provide the color and detail that give these models and scenes a sense of realism.

In Aladdin, there is a set of tools that go beyond these basic requirements into a world of superb and beautiful effects. These tools captivate the imagination, and in one fell swoop make you feel like a god and a magician at the same time. The tools I speak of are the gas,



This yellow ball is an example of the many flare images supplied by the Aladdin program which I used in the images as flares or fountains.

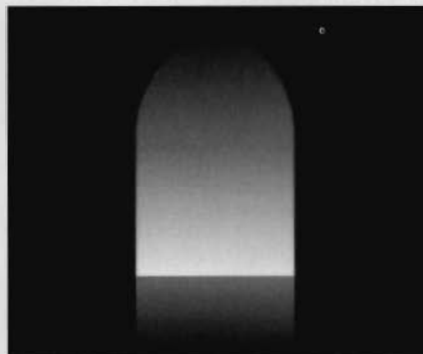
wave, flare, and fountain systems that are fully integrated into the Aladdin workspace.

These are the tools that will go beyond the stark realism of our scenes, and provide a potent and compelling atmosphere. I might add at this point that the new release of Aladdin by Nova Design (which may very well be available when you read this) will augment these features to an extent that will be mind-boggling.

Let's begin with a fairly simple effect which is quite necessary for the interior space of my church. The altar is an essential aspect of the church structure, and requires a certain atmosphere to evoke a sense of the sacred. I created a raised floor in the altar section with 2 steps leading up to it.

In the center of the floor I placed a large rectangular solid for the altar which I shaded and texture-mapped with a procedural texture called Noise:Open. The next step was to drape this block of stone with an altar cloth. The problem here is to create a polygonal model that will look soft and wavy, like a curtain. I used the spline tool to create a simple curve, converted this into a poly, and then extruded the poly to a length slightly longer than the altar stone. In order for this technique to work, the drapery model needs a fairly large number of triangulated polygons, for we will actually make this model ripple in space with our wave tool.

Actually, Aladdin has two Wave tools. One tool moves polygons in space in a wave-like pattern, the other creates wave-like patterns in the shading or texture map applied to the object. The one used here is the "mechanical wave" generator for a very realistic 3-dimensional appearance. The wave tool created for this is an animation path which the drapery is assigned to. If we created an animation without further modifications in this scene we would actually see the model of the altar drape "ripple" in space (which might be very cool if the stained glass windows were to suddenly fly open). But for our purposes, in the still, quiet atmosphere of the church, the drapery must retain a kind of static ripple, which doesn't move.



This is a texture map applied to one side of the gas container to modify the density of the gas so it seems like it's streaming from the window.

How do we do this? Aladdin offers the user control over animation, which includes a spline control that allows you to "freeze" a point in animated time.

Once we have our wave path in place, we preview the animation in wireframe and observe the animation frame that gives us the desired "ripple" effect. We then use the spline control to draw a straight line with the value of the wave effect held at that frame across all frames of any intended animation. Aladdin is designed for animation, so even if you just want to create a single portrait of a scene, it would still be considered a "frame" of an animation. A cloth-like texture map was applied to the altar drapery, with

0 hardness, and low reflectivity for the final effect.

Aladdin has its own global and local light sources which do a good job of illuminating our scenes, but for this project I wanted something a bit more dramatic. I wanted to see the altar and beveled cross (easy to model with the beveling tool) bathed in an otherworldly light that comes from the side window. This is where the gas tool comes in quite handy.

Gases in Aladdin are "held" in rectangular containers. Once you call up the gas tool, the container will appear in your 3-dimensional space, and you can then manipulate the gas to your heart's content. The tool window for the gas container (called the "Gas Object Control") allows you to change the form of the gas (spherical, solid, etc), the density, turbulence, strength, fall-off, and numerous other options. The color and transparency of the gas is actually controlled through the attribute list, and, amazingly enough, you can "shape" a gas by using texture maps on the sides of the container!

This is the approach I used when designing my gas to serve as a light stream that, in essence, "bathed" the altar with a palpable illumination. This is a tricky task, and it took me a great deal of time to get it right. One of the tricks in using gas as visible light is to set the samples/pix setting in the Gas Object Control to a high setting so the gas is very smooth. This, unfortunately, increases the rendering time a great deal, and made me long



This star is also an example of a flare image by Aladdin which I used in the enclosed images.



This image uses the gas effect in Aladdin to shed radiance on the altar.

for an '060 board for my 1200 (or even better, a Dec Alpha processor running at several hundred megahertz. Anyone at VIScorp reading this article?). Anyway, there was much trial and error in this process, but the results are very satisfying. Here are the steps for anyone trying to reproduce this effect:

1. Render a 2-color image with the window flat-viewed against the side of the gas container. This is much like the process used to create our stained-glass window in part 2 of the tutorial.
2. The gas uses the luminance of a texture map to determine the density of the gas (like an alpha channel), so you use shades of grey, with white providing full density for the gas, and black providing no density.
3. Take your 2-color image into a paint or image-processing program and paint it as you wish with shades of grey to create the density setting you desire. (I did a couple of flood fills with a dark to light range of greys so the light would seem to come from the window at an angle.)
4. Back in Aladdin, apply the image as a texture map to the side of the gas where the light will be

coming from (the side that butts up against the window).

5. In the "Gas Object Control" window, click the density button for the side(s) you desire, set the sample/pix to a high setting (24 or 36; the higher the better), set the strength of the gas at 10, the falloff at 1, and turbulence to 0. Click on the buttons for the sides that you applied color to (through the attribute list—I applied yellow to the top of the container, and red to the bottom). Set the attenuation to Solid.

This is pretty much a basic procedure with lots of room for experimentation. It should be noted at this point that gases are fully animatable. If I desired an animation of this scene, I could increase the turbulence of the gas over time, the color could change, the gas container could grow till it filled the entire altar space, and, astoundingly enough, the texture map applied to the sides of the container could be animated to create subtle changes in density over time!

One may place gas containers that mingle with each other and overlap in 3-dimensional space, and then have a camera plunge through the whole affair. If I am getting carried away

here, it can't be helped. In musing over these possibilities, you realize that Aladdin was, and is, way ahead of its time. With the new features added by Nova Design, we are going to need new, more powerful Amigas to fully explore all that this program can offer.

Special Effects Particles

Let's move on to another powerful special effect tool, the Aladdin particle system called Fountains. When I bought version 3 of the software two years ago, the fountain system had just been implemented. As I worked through the fascinating tutorial by Greg Gorby, I remember feeling a sense of awe at the magnitude of this tool, and the possibilities it offered for creating marvelous effects. I also remember the subtle warning offered by Greg at the beginning of his tutorial - Fountains are not for the faint of heart. They are, most definitely, a challenge, but every step of the way towards their mastery provides the user with a sense of joyful discovery.

I thought I would employ the fountains in a simple way in the altar scene just to demonstrate their usage for this tutorial. I used fountains for other effects in the overall creation of the Gothic Church. If you recall the primary image used in the first tutorial, which showed the church nestled amidst snowy hills, fountains were used to create the stars, and the subtle mist that hovered about the walls of the church.

The fountain is basically a straight, vertical line in space (I think of it as a magic wand) that emits particles from its lower point. The particles have a life span, and an infinite capacity for movement and growth. Fountains, like all other aspects of Aladdin, were designed for the 4th dimension of time.

Fountains have an incredible range of uses; the most obvious being stars, but I have seen them used to create clouds, waterfalls, and tornadoes. In this drawing, I used one fountain with 120 particles assigned to it to create a magical sparkle to the gas radiance. Fountains, like flares, have texture maps assigned to them. The

texture map can be opaque, or have degrees of transparency according to the varying degrees of luminance in the image, and, yes, these texture maps can be animations.

The control panel for fountains is packed with options for controlling the particles. There are settings for size, strength, distance, rotation, drift, life, and so on. There are also controls that open new windows for further subtle maneuvering of the little critters such as PreRoll, which sends the particles on a pre-determined voyage before the animation begins, and allows further control through the particles' old age! We don't have room enough here to delve into the further complexities of fountains. Let's just say that most of the settings for this image are at their defaults.

I set the distance of the particles so they would stretch the length of the gas. To assist in this effort, I employed the drift factor settings so they would follow the downward slant of the radiance, and move in a bit towards the camera. I also employed an obscure setting for attribute independence near the top of the control panel.

Fountains can have attributes like color assigned to them, as well as texture maps. I reduced the color setting in the texture list window so the particles would use the colors derived from their assigned attribute list. In the attribute list I assigned an entry color of yellow, and an exit color of red. By clicking the attribute independence button on in the fountain control, and giving it a random setting, each particle in the stream takes on some varying shade of yellow or red. This fits well with the color scheme of the gas (also having a yellow to red range).



This image adds the Fountain particle system of Aladdin to add magical sparkles to the radiance.

To give you a further sense of Fountains, I have included an image of the texture map assigned to the fountain used in the altar scene. Note how the primary image in the texture maps fades into a black background, which is completely transparent in these drawings.

Flare

The final element in our tutorial is the flare object, which is perhaps the simplest effect to use out of the whole roster of effects. Flare objects behave like individual particles in the fountain system. They use texture maps and attribute lists, and they, too, can be opaque, or have varying degrees of transparency.

Flares are handy to use with particles when you want one or two elements to stand out from the others (such as one large star in a field of smaller stars). In this case, I wanted to create the impression of the radiance causing a flash of light as it hit the cross on the altar.

I poised the flare object (basically a flat triangle) over one arm of the cross. In the Flare Source Control

window, I adjusted the size so it would be slightly bigger than the particles from the fountain. I used a star-like image as a texture map, and used the bluish-white color of the bitmap as its color in the drawing, rather than create a new color with an attribute list.

That's basically it for special effects in this tutorial. I hope I have given you some idea of the possibilities inherent in the Aladdin program. I am sure you realize at this point that these will not be mastered in a day, or a week, or even a month. After two years of working with this program, I still get the sense that I am only scratching the surface.

What new levels of power will be added to Aladdin by the team at Nova Design remains to be seen, but I have a strong sense that the new version will be unparalleled in its range of effects and new tools. Hopefully, I will revisit these pages again with a new tutorial using version 5 of the program.

Until then, do yourself a favor. Rub the lamp, and conjure up your own dreams and wishes. You will be amazed at what you can do.



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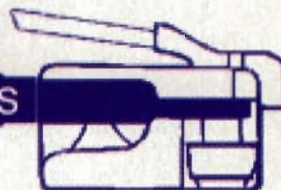


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on line

amiga telecommunications

by
Rob
Hays



More Web authoring tools available on-line.
Plus the latest news on Portal and more!

This month we begin by continuing last month's discussion of HTML authoring programs. Unfortunately, I ran out of space before I got to Magic WWW files Maker, from Massimo Baglione.

MWM

MWM operates on existing ASCII text files, containing no text editing functions of its own. When started, three windows of various sizes will open (Figure 1). The largest of these shows your text file. By clicking the mouse on a line of text, you highlight that line.

Now you can select actions to be performed on this text from the icons at the top of the window, or corresponding menus. These include the normal HTML size, style, and formatting codes, as well as Hypertext links, and image codes. These often open their own windows of further options (Figure 2). If you wish to work with individual words in a line of text, double-clicking on the line will place it into a new window which allows you to drag-select the desired words.

The window to the left of the main window contains a short description of the HTML modifications to each line of text, and the window along the bottom of the screen is a log file of modifications made. Both of these windows can be toggled off if you prefer. By defining the path to your favorite browser in the programs preferences, a

click on the "View" button will save your file, start the browser, and load the file for viewing.

MWM is shareware, with a \$25 fee to unlock some of the features, and requires OS3.0 or above. As of this writing, version 1.08 is the most recent, and can be found on AmiNet in the comm/www directory as mwm108.lha.

lbrowse Plug Ins

If your browser of choice is lbrowse, then you will want this site (Figure 3) added to your hotlist. Maintained by John Wingell, this is the place to go for all sorts of programs to enhance lbrowse. John has collected

not only the programs, but also detailed instructions for integrating them with lbrowse. Whether you are looking for an animation player, audio player, or the latest picture viewing Datatype, go to:

<http://home.eznet.net/~wingell/lbrowse/>

A notice posted as of this writing indicates the site may be moved soon, and lists an alternative URL as:

<http://www.rit.edu/~jbw0577/lbrowse/>

SASG

The Standardized Amiga Shareware Group has a new web site up (Figure 4). From this site you can not only learn about the group, but download the latest demo versions of

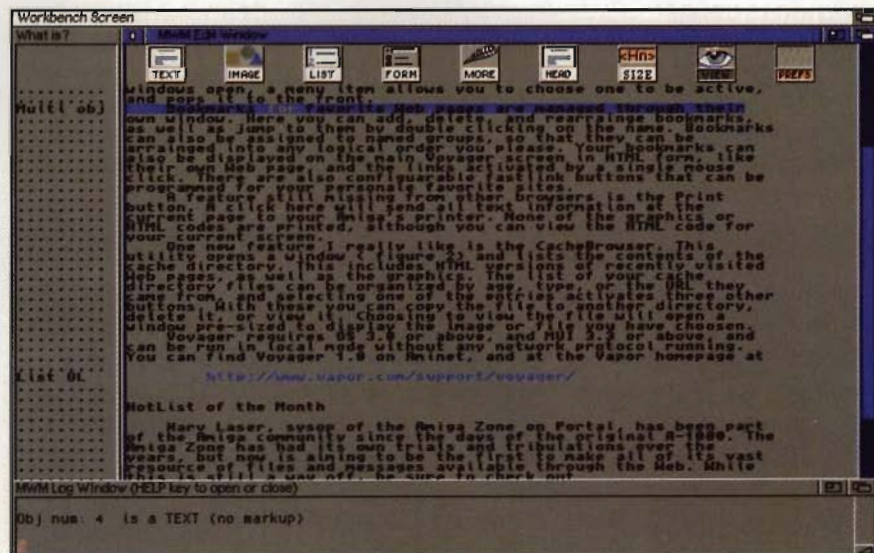


Figure 1: MWM is an HTML editor that contains no text editing functions of its own but operates on existing ASCII text files.

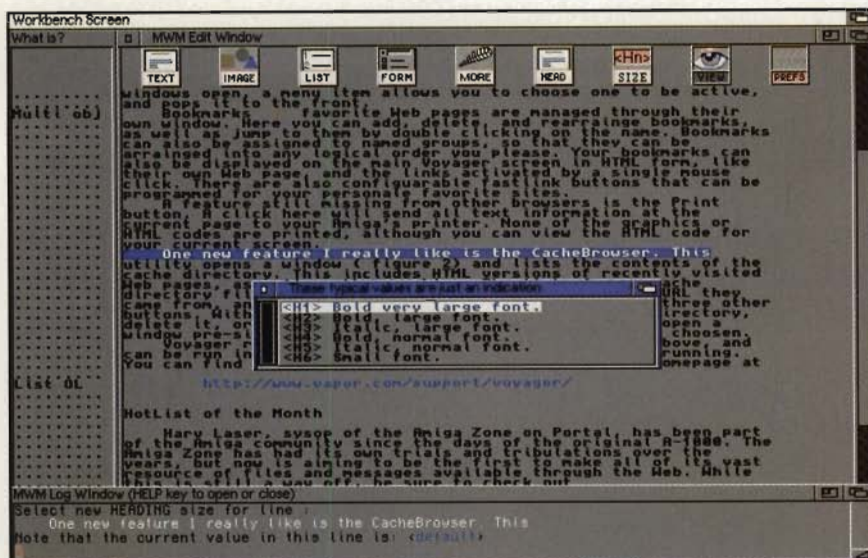


Figure 2. In MWM, functions often open their own windows of further options.

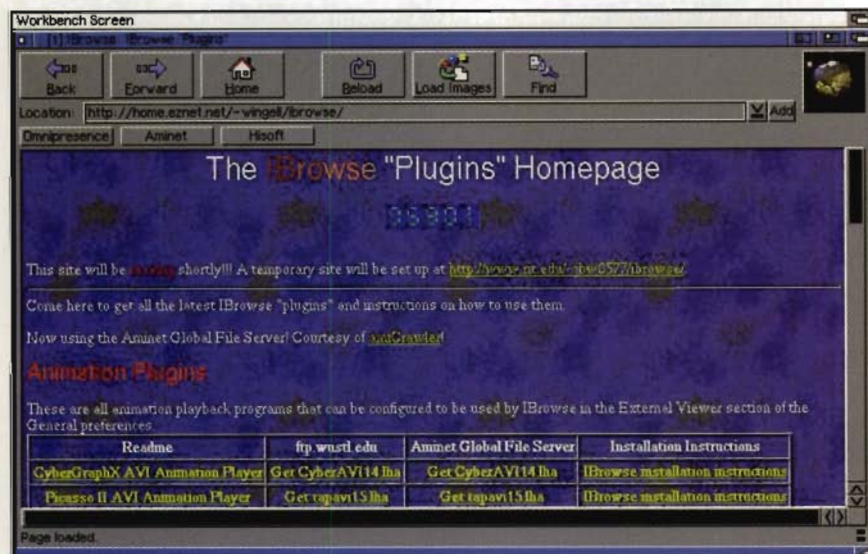


Figure 3. Maintained by John Wingell, this is the place to go for all sorts of programs to enhance iBrowse.

their programs. These include Magic User Interface, which is required for all Amiga Web browsers with the exception of AWeb. Also here is Magic WorkBench, Magic CX, and DFA. Magic CX is a super Commodity Exchange program that includes many different options, and DFA is an address database program.

Shareware is a great idea in computer programs whereby you get to try out a program before buying it. It is not without its problems though. Many people fail to buy the programs, even though they continue to use them. They rationalize this with tales of how difficult it can be to register the

programs, and of long delays in receiving the keyfiles that unlock the demo versions and turn them into fully functioning programs. While all of these can be problems, a visit to the SASG site can result in receiving your keyfile in as little as 24 hours.

The Amiga community has enough challenges to overcome without driving away the talented base of programmers we have. Abuse of the shareware system is doing just that. If you use shareware, pay the author for their work. Visit the SASG site at:

<http://www.sasg.com/>

WWW Test Pattern

HTML as a standard presents a moving target to developers and users alike. Version 2.0 is the current standard, with a version 3.0 being finalized. Unfortunately, competition between Netscape and Microsoft for supremacy in the PC Web Browser field has muddied the waters a bit further. Each company, in an effort to add new features, has introduced certain HTML codes that are not part of the existing, or proposed, standard. These have become known as the Netscape and Microsoft extensions.

If you want to see how your favorite Amiga browser handles the latest variations in this evolving standard, check out:

<http://www.uark.edu/wrg/>

This site (Figure 5) contains examples of all version 2.0, many 3.0, as well as Netscape, Microsoft, and Java codes. This is also a good site to see examples of how these new codes are used. Have your browser display the source of a particular page to see ready-made examples.

Updates

You would have to look long and hard to find a more dedicated Amiga supporter than Harv Laser. As the head sysop of the Amiga Zone, he has spent the last ten years providing invaluable assistance to many Amiga owners. In fact, Harv is probably beginning to feel a bit like the Amiga.

The Amiga Zone began on a system called People/Link, who decided to close their doors suddenly. He then moved all of the files (many of which are available nowhere else) and user messages to Portal Online System.

As of September 30, Portal has ceased to operate as a online service and internet provider, so Harv has been busy moving things again. The Amiga Zone is now part of CalWeb Internet Services. An extra bonus is that CalWeb is run by a long time Amiga owner. Visit the new Amiga Zone Web page at:

<http://www.amigazone.com>
and say "hi" to Harv.

On a personal note, as of December I will be discontinuing my Delphi membership. This is no reflection of dis-satisfaction with Delphi, or any of the fine people who make up the Amiga section there. Rather it is a reflection of the changing face of telecommunications. When I began this column, Delphi was one of the few ways for non-university people to access the Internet. With the advent of local Internet Service Providers, this is no longer true.

I will be continuing my memberships with CompuServe, Genie, and my Internet account. I will also most likely open an account with the Amiga Zone when they get up to speed.

Who Ya Gonna Call?

Here are some more Amiga BBS numbers as supplied by readers. The first is an updated listing. If one is in your area, give them a call and check it out. Tell them Rob sent you!

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 SPEEDS: Up to 33.6kbps
 NETWORK: CLink! KY HUB
 911:6490/0.0
 CONTACT: Gringo
 (Patrick Greene-Sysop)
 gringo@kvnet.org
 Grim Reaper
 (John Wells-CoSysop)
 johnw@kvnet.org

NAME: Rock Island Super Computer
 PHONE: (319) 797-5530 and 797-5473
 SPEEDS: 1200-28.8kbps

NAME: Ultimate Sins II
 PHONE: (319) 285-5407
 SPEEDS: 2400-28.8kbps

NAME: Morgue BBS
 PHONE: (513) 742-2005
 SPEEDS: 2400- 14.4kbps
 SETTINGS: 8N1, RTS/CTS
 EMAIL: tduddy@goodnews.net



Figure 4. At the SASG site you can learn about SASG as well as download the latest demo versions of their programs.



Figure 5: <http://www.uark.edu/~wrg/> contains examples of all HTML version 2.0, many 3.0, as well as Netscape, Microsoft, and Java codes.

Where To Find Me

rhays@kiva.net
<http://www.kiva.net/~rhays>
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 72764,2066 on CompuServe

For U.S.Mail:

Rob Hays
 P.O.Box 194
 Bloomington, IN 47402

Please include a SASE if you need a personal reply.

If you run an Amiga specific BBS, send me the information callers will need to access your system. Phone

number(s), modem speeds, software settings, etc. As a service to the Amiga community I will include the information I receive in this column from time to time.

If you come across any World Wide Web sites you feel would be of interest to the Amiga community, pass them along for inclusion in the Hotlist of the Month. Send the info to any of my addresses above.

Happy Holidays to all of you and yours! That's all for now. See you on line!

•AC•

Web Typesetting

Part 9: Frames

by Randy Finch

**Frames are the next big thing on your web site.
Also, more reader's sites from the web.**

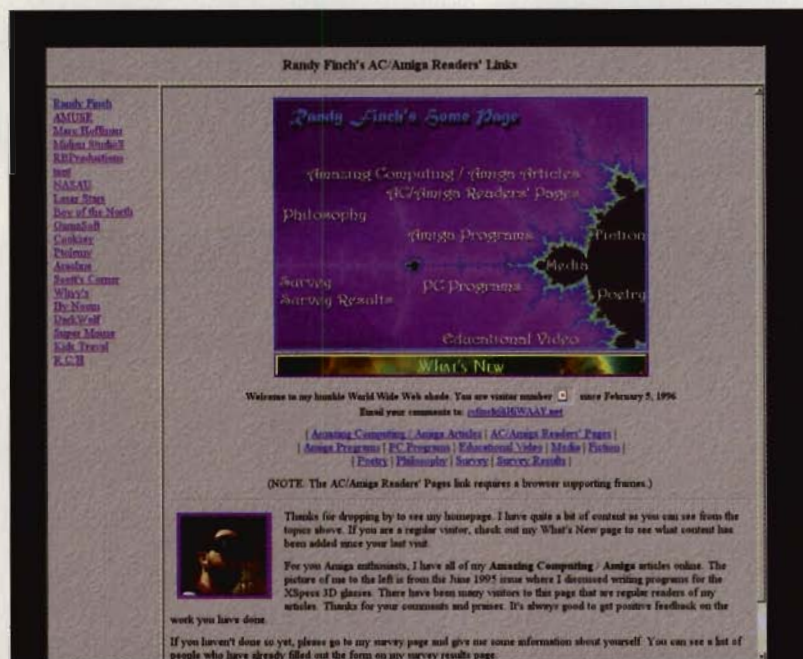


Figure 1. A Web Page Using Frames

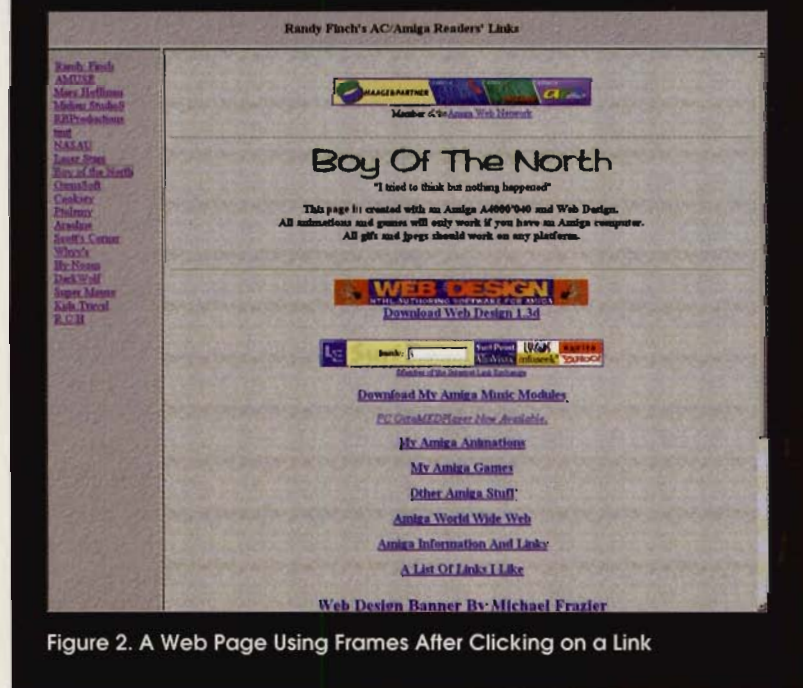


Figure 2. A Web Page Using Frames After Clicking on a Link

Get ready. You are about to be framed. No, I am not setting you up to take the fall. I am setting you up to take advantage of some of the latest technology in Web production. It is so new, that it is not yet in the HTML standards. I, of course, am talking about frames.

The tags and attributes for coding frames was developed by Netscape for their Navigator Web browser and is gradually being added by other companies to their browsers. You might be asking, "Why should Randy be covering frames when Amiga browsers are not yet up to speed with this technology?" Well, it's just a matter of time before Amiga browsers will support frames and it's always good to be ahead of the game. So, let's get started.

What are Frames?

Frames divide a browser's display area into rows and columns similar to tables. However, unlike tables, each "cell" or frame can contain a totally different Web page. For instance, a title page could appear in a frame that spans the entire width of the browser window at the top of the viewing area. Another frame to the left of the remaining area could be used to display a page containing a hypertext table of contents. The frame on the right could be used to display another Web page based on the user's selection in the table of contents.

This is exactly what I did in Figures 1 and 2. The title appears at the top. The table of contents to the left show the names of Web sites created by readers' of this magazine. These names appear as hypertext. When you click on one of the names, the home page for that site appears in the frame to the right.

How Do You Code Frames?

Frames are really quite easy to code. Look at Listing 1 to see the code for Figures 1

and 2. Basically, frames consist of a series of FRAMESET and FRAME tags along with their associated attributes. According to Netscape, the FRAMESET tag and the closing /FRAMESET tag replace the BODY and /BODY tags in regular HTML code. But Netscape Navigator allows the BODY tag to also appear in the code as in Listing 1. However, the FRAMESET tag must appear outside of the BODY.../BODY tags.

Some browsers, such as Microsoft Internet Explorer, allow the FRAMESET tags to appear inside the BODY.../BODY tags. As Amiga browsers begin to support frames, be careful. Just because the frames code works with one browser does not mean it will work with all frames-supporting browsers.

**Unlike tables, each
"cell" or frame can
contain a totally
different Web page.**

FRAMESET is the basic structure for creating frames. Its attributes, ROWS and COLS, allow you to define how the rows and columns of the frames will be laid out. Looking at Listing 1, you will see that the first FRAMESET tag defines ROWS as 60,*. The 60 indicates that the first row should be 60 pixels high. The * indicates that the next row should contain all the remaining space.

The method by which you can define columns and rows is very flexible. A percent sign can be used after a number to indicate that a certain percentage of the available space should be used for the frame. Also a number can be used in front of an asterisk to indicate relative size. For instance, suppose you wanted to divide the browser window into four rows where the first row was 50 pixels high, the third row used 20% of the vertical window space, and the second and fourth rows took up the remaining space with the second row taking up twice the height of the fourth. The following code would do this:

```
<FRAMESET ROWS="50,2*,20%,*">
```

Notice that an asterisk is used twice. This means that these two rows should use the space remaining after allocating 50 pixels to

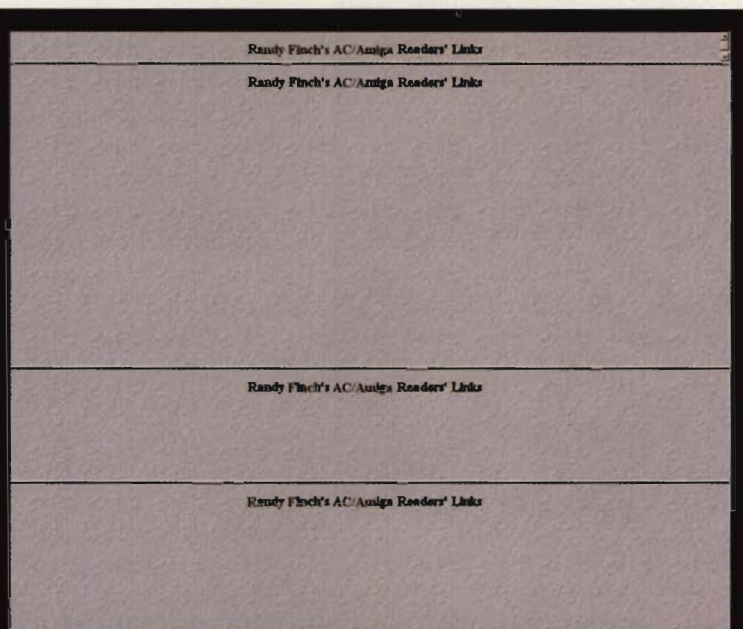


Figure 3. A Framed Web Page Using a Combination of Pixel, Percent, and Relative Sizing



Figure 4. Super Mouse at <http://www.nexusprime.org/personal/smouse/index.htm>



Figure 5. Kids Travel at <http://www.tol.net/kidstravel/>

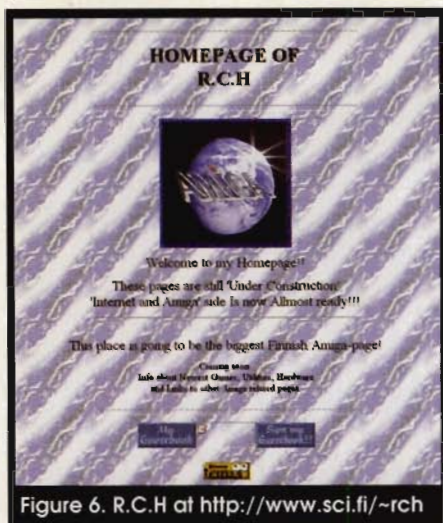


Figure 6. R.C.H. at <http://www.sci.fi/~rch>

row 1 and 20% of the space to row 3. However, since a 2 appears in front of the asterisk representing row 2, this row should use twice as much space as the row 4 (Figure 3).

You need to be careful how fancy you get when coding frames. Remember that different people will have different size browser windows. You could end up allocating all the available space to rows or columns defined with pixels and percentages and leave no space for the rows or columns defined with asterisks.

Once the initial division into rows or columns has taken place, each row or column can be further subdivided by using a nested FRAMESET tag. Ultimately, however, the FRAME tag will have to be used to define how each frame will appear. The FRAME tag has several attributes: SRC, NAME, MARGINWIDTH, MARGINHEIGHT, SCROLLING, and NORESIZE.

SRC allows you to define the Web page to appear in the frame. If this is not defined, the frame will be blank. NAME defines a name for the frame so that it can be referenced by another Web page. If no name is specified, then it cannot be referenced. MARGINWIDTH and MARGINHEIGHT allow you to specify how much of a margin, in pixels, should be used within the frame. If these attributes are not used, then it is left to the browser to decide appropriate margins.

SCROLLING can be set to YES, NO, or AUTO. YES indicates that a

scrollbar should be displayed by the frame. NO indicates that no scrollbar should be displayed. AUTO indicates that the browser should display scrollbars as needed. The default is AUTO. NORESIZE is a flag attribute that instructs the browser to not allow frame resizing. By default, the user can drag the frame borders to resize frames.

As you can see in Listing 1, I use a FRAME tag and a nested FRAMESET tag within my initial FRAMESET tag that divided the browser window into two rows. The FRAME tag specifies that an HTML file named `acreaderslinkstitle.html` (Listing 2) should be displayed in the first row with auto-scrolling.

The nested FRAMESET tag further subdivides the second row into two columns. The first is 180 pixels wide and the second takes up the remaining space. The FRAME tag for the first column specifies the display of `acreaderslinkstoc.html` (Listing 3). This file is a bunch of hypertext links to other pages on the Web. The FRAME tag for the second column initially displays my home page, `home.html`. However, this frame is named `ACReadersPage`. If you look at Listing 3, you will see that all of the hypertext links specify a TARGET of `ACReadersPage`. Thus, when someone clicks on a link in the left column, a new page will appear in the right column. I think this is pretty cool and I think you will, too. If you have access to a browser that supports frames, check out my Web site, <http://fly.hiwway.net/~rcfinch>, to see how this works.

More Readers' Pages

Since my last article, I have received the addresses of more readers' Web sites. Here is a brief description of each.

Super Mouse

This site (Figure 4) was submitted to me by Hal White. It is currently under construction, but already contains some interesting links. He plans to add some artwork in the future. The address is:

<http://www.nexusprime.org/personal/smouse/index.htm>.

Kids Travel

Rodney Volkmar submitted this site (Figure 5). The main topic at this site is the Kids Can Travel desk that kids can use while traveling. Take a look at this site, especially if you have kids that get bored while on those long rides to Granny and Peepaw's house. The address is:

<http://www.tol.net/kidstravel/>.

R.C.H

Here's a Web site all the way from Finland. Roy Hallila plans to have the largest Amiga site in that country. However, at this point, he is still working on it. The address is:

<http://www.sci.fi/~rch>.

Roy will be adding information about games, hardware, utilities, and posting links in the near future.

</FRAMESET>

Well, that about wraps it up for this time. Although I have covered frames as defined by Netscape, remember that other companies can always add new features to their browsers. Already, Microsoft has added border-less frames to its browser. I know it's hard to keep up, but it's always fun to have new toys to play with. Remember to keep sending me addresses for your Web sites.

I wanted to let you know that I have accepted some additional responsibilities related to a conference I attend each year. Therefore, I will have less time to write articles. I plan to conclude this series next month. However, I still intend to write stand-alone articles about Web publishing on a non-regular basis. If you have a topic you would like for me to cover, send me Email at rcfinch@hiwaay.net. If I know anything about the topic and can write a halfway decent article, I will do so, time permitting.


```

<HTML>

<HEAD>
<TITLE>Randy Finch's AC Readers' Links</TITLE>
</HEAD>

<FRAMESET ROWS="60,">

    <FRAME SRC="acreaderslinkstitle.html" SCROLLING="auto">

    <FRAMESET COLS="180,">
    <FRAME SRC="acreaderslinkstoc.html" SCROLLING="auto">
    <FRAME SRC="home.html" NAME="ACReadersPage" SCROLLING="auto">
    </FRAMESET>

</FRAMESET>

<BODY>
</BODY>

</HTML>

```

```

<HTML>

<HEAD>
<TITLE>Randy Finch's AC Readers' Links Title</TITLE>
</HEAD>

<BODY BACKGROUND="backgrounds/PaperRelief.gif">

<CENTER>
<H3>Randy Finch's AC/Amiga Readers' Links
</CENTER>

</BODY>

</HTML>

```

```

<HTML>

<HEAD>
<TITLE>Randy Finch's AC Readers' Links TOC</TITLE>
</HEAD>

<BODY BACKGROUND="backgrounds/PaperRelief.gif">

<A HREF="home.html" TARGET="ACReadersPage">Randy Finch</A><BR>
<A HREF="http://www.serv.net/~eagle/" TARGET="ACReadersPage">AMUSE</A><BR>
<A HREF="http://www.lopernet.net/marc/Marc's_Page.html" TARGET="ACReadersPage">Marc Hoffman</A><BR>
<A HREF="http://www.azstarnet.com/~midian/" TARGET="ACReadersPage">Midian StudioS</A><BR>
<A HREF="http://www.goodnet.com/~cyrano/" TARGET="ACReadersPage">RBProductions</A><BR>
<A HREF="http://www.netrover.com/~timt/" TARGET="ACReadersPage">timt</A><BR>
<A HREF="http://www.amiga.org" TARGET="ACReadersPage">NASAU</A><BR>
<A HREF="http://www.achilles.net/~jtalbot/" TARGET="ACReadersPage">Laser Stars</A><BR>
<A HREF="http://www.net-link.net/~lmcsahey/" TARGET="ACReadersPage">Boy of the North</A><BR>
<A HREF="http://members.aol.com/GamaSoft/index.htm" TARGET="ACReadersPage">GamaSoft</A><BR>
<A HREF="http://www.inet-direct.com/cooksey/index.htm" TARGET="ACReadersPage">Cooksey</A><BR>
<A HREF="http://www.ids.net/~nightspd/ptolemy/ptolemy.html" TARGET="ACReadersPage">Ptolemy</A><BR>
<A HREF="http://www.ids.net/~nightspd/arachne/arachne.html" TARGET="ACReadersPage">Arachne</A><BR>
<A HREF="http://www.ddd.net/scribers/zscott2/index.htm" TARGET="ACReadersPage">Scott's Corner</A><BR>
<A HREF="http://www.geocities.com/Tokyo/4987" TARGET="ACReadersPage">Why?</A><BR>
<A HREF="http://www.stumpworld.com/hynoom" TARGET="ACReadersPage">Hy Noom</A><BR>
<A HREF="http://www.otn.net/mypage/kellum" TARGET="ACReadersPage">DarkWolf</A><BR>
<A HREF="http://www.nexusprime.org/personal/smouse/index.htm" TARGET="ACReadersPage">Super Mouse</A><BR>
<A HREF="http://www.tol.net/kidstravel" TARGET="ACReadersPage">Kids Travel</A><BR>
<A HREF="http://www.sci.fi/~rch" TARGET="ACReadersPage">R.C.H</A>
<!-- <A HREF="" TARGET="ACReadersPage"></A><BR> -->

</BODY>

</HTML>

```

•AC•

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Using an IDE/ATAPI CDROM with an Amiga 1200 or A4000

by Dave Matthews

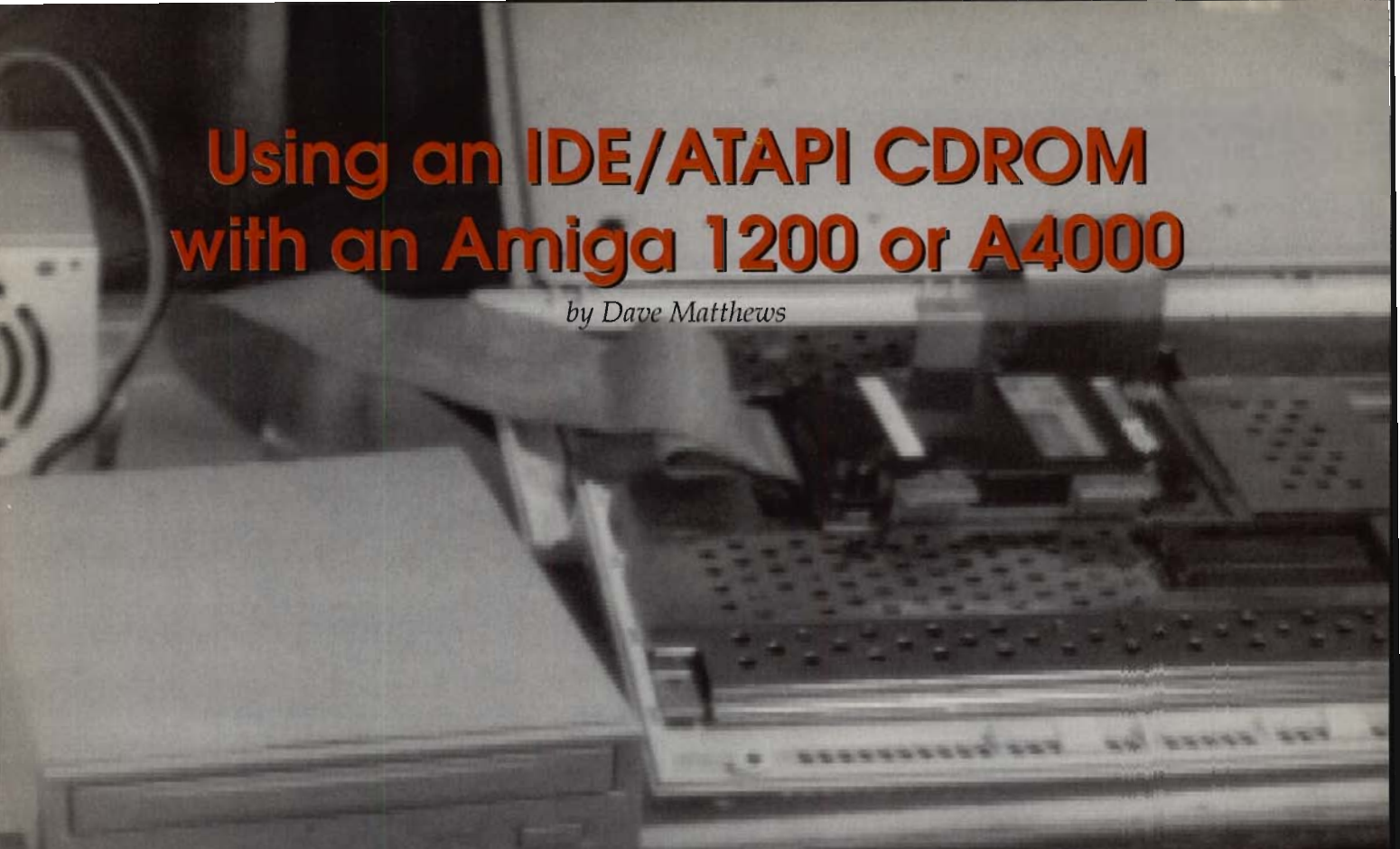


Figure 1: The Author's Mitsumi FX410A IDE CD-ROM.

Life in the nineties just doesn't seem complete without a CD-ROM. The majority of new PCs and Macs come with the CD-ROM built in. The Amiga, while somewhat late to the ball, is gaining more and more CD-ROM applications and many programs are beginning to ship on CD-ROM (Lightwave, Personal Paint, Distant Suns etc.) not to mention clip art, texture and picture CDs.

While the Amiga has almost exclusively used SCSI CD-ROM, the price of the IDE (ATAPI) CD-ROM has plummeted. A typical ATAPI CD-ROM might cost half what a comparable SCSI CD-ROM does. Moreover, stock 4000s and 1200s will also incur the additional cost of a SCSI adaptor.

Since IDE supports two devices, if you only have a single hard drive, wouldn't it be nice to use the free IDE port for a CD-ROM? Well, you might just be able to!

ATAPI

Atapi.device, by Oliver Kastl, Elaborite Bytes, allows you to access an ATAPI CD-ROM, just as if it were a

SCSI device. Basically, this software translates the normal SCSI calls to work with the ATAPI drive. You can find a demo either on your favorite BBS or on Aminet, Atapi93.lha.

Elaborite Bytes also offers CacheCDFS, a CD-ROM file system, and a CD32 emulation package to run CD32 games on your Amiga CD-ROM.

Before you rush out and buy a CD-ROM, you should take a moment to plan out the new addition. First, on the 1200, an IDE CD-ROM will require a special cable (more on that later). Since most IDE CD-ROMs will be internal models (some manufacturers may have external models available, but these will be more expensive), A1200 owners will need a 5.25 drive enclosure. These are widely available, starting at under \$50.00.

You will also need some way to power the CD-ROM. Many people buy PC cases with a power supply built-in. This solves both the enclosure and power questions. Note, if you have replaced your stock Amiga power supply with a power supply like Micro R & D's Bigfoot (which I

highly recommend) then you can power your CD-ROM from one of the extra power leads. In a pinch, you could wrap the CD-ROM in thin plastic or cardboard. This is not very hi tech, but should suffice.

Note, by the time you take all these matters into consideration, it may seem like the IDE CD-ROM is not so cheap, but you will still need cables, enclosure and power for a SCSI CD-ROM, plus an enclosure if it is not an external model. The price is still much less for an IDE drive than for SCSI.

The Hardware

First of all, make absolutely SURE you are getting an ATAPI drive. Almost all new IDE CD-ROMs will be ATAPI, but if it doesn't specify it, ask! Older IDE CD-ROMs used custom interfaces and will NOT work.

The author of the ATAPI device recommends several drives, including:

Mitsumi FX 400 (4x speed)
Chinon CDS-545 (4x speed)
Toshiba XM-5302B (4x speed)

I myself have a Mitsumi FX410A (FX400 successor). This is a fine drive, quick and very affordable, around \$70 street price. When you install your drive, make sure it is jumpered for SLAVE, even if you don't have a hard drive. And yes, you can install a CD-ROM on a floppy based system, in fact, it's easier, as you don't have to worry about hard drive conflicts.

On an Amiga 4000, installation will present no particular challenge. You may have to buy a replacement internal IDE cable, as the factory 4000 cable is rather short. However, this is a standard item, widely available and inexpensive. If you are lucky, the drive will fit right into the 5.25" bay. This may be a tight squeeze, but most drives will fit.

The 1200 presents a bigger challenge. Because Commodore, in their infinite wisdom, chose to use the smaller notebook style 44 pin IDE connector, attaching an IDE CD-ROM and/or a 3.5" IDE hard drive requires a special cable. This cable connects the 44 pin header to the 40 pin 3.5" IDE connectors. The 2.5" drives need the extra four pins for power. 3.5" hard drives and IDE CD-ROMs have a separate power connector, and thus only need 40 pin cables. Depending on your needs, there are several ways to do this.

If you already have a 2.5" drive installed, you will need a cable with one 44 pin connector and one 40 pin connector. If you want to attach a 3.5" hard drive and a CD-ROM, you will need a cable with two 40 pin connectors.

These cables are somewhat hard to find, at least in North America, but construction of such a cable is relatively easy for someone with technical skills, so you should be able to find an Amiga dealer or repair shop that can make you one. I bought mine for well under \$20.

If you wish to build one yourself, download Hydra's IDE2AMI5.lha, which contains thorough documentation on this type of project. Actually, anyone planning to add an IDE CD-ROM, 3.5" hard drive or both should have a look at this file.

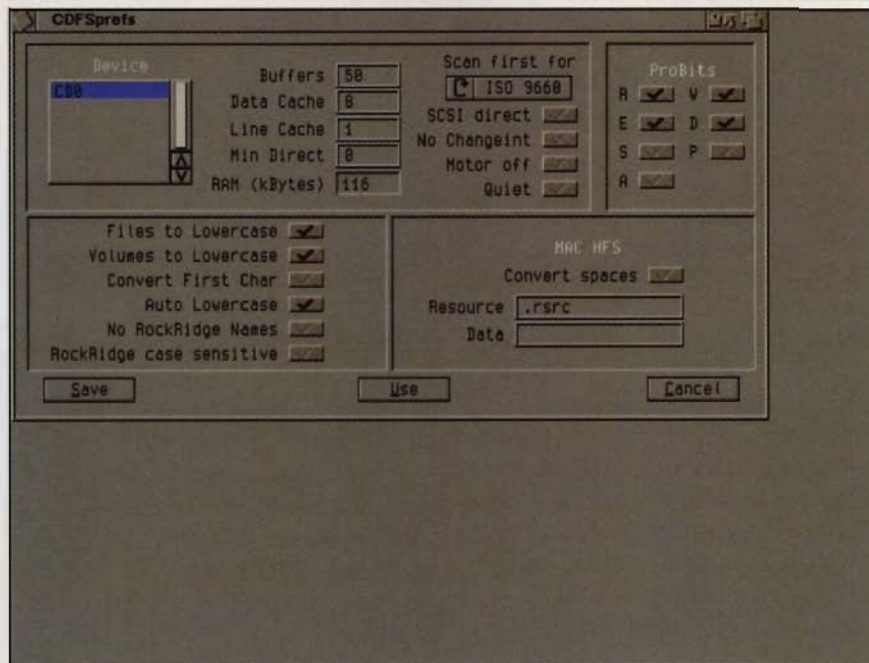
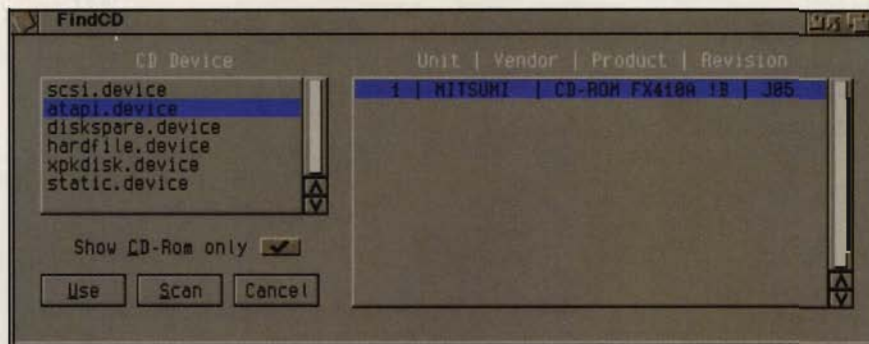


Figure 2 (top): FindCD, ATAPI device utility.

Figure 3 (bottom): CDFSprefs, CacheCDFS prefs.

Unfortunately, even with the correct cable, you may have trouble using two IDE devices on the 1200. Some drives will either not work period, or fail to operate with a second device. This has been reported with drives from Maxtor, IBM, Conner, and Quantum. Currently, there is not a comprehensive list available of usable drive models. According to Hydra, who wrote the IDE2AMI docs, the Western Digital Caviar 2250 and 2420 (250MB and 420MB respectively) work well.

The Conner CP2044PK, on the other hand, works fine alone, but refuses to mount with a 2nd IDE device, whether a hard drive or CD-ROM. From what I could determine, the 1200's reset procedure interferes with some IDE drives. There is a program which will serve as a work around for this problem.

The file Rset1200.lha, by Carsten Sørensen contains a small program which resets the Amiga in a manner which bypasses the problem reset code. This is not a perfect solution, but it does make some recalcitrant drives (like my Conner) usable.

If you can, buy your CD-ROM from a dealer that accepts returns. Make sure you have (or have a source for) all the cables and other gear before you buy the drive. This is probably not a problem in Europe, but may take some digging here in North America. Ideally, a dealer could do the cable fabrication and installation, and testing for you. Figure 1 is a picture of my 1200, with the Mitsumi CD-ROM connected to the Conner hard drive.

The Software

Once you have the CD-ROM drive hooked up correctly, the rest of the

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story is pretty easy. There are two parts to install for ATAPI drives, the actual ATAPI device, and a CD-ROM file system. The ATAPI software installation is very easy, using the included installer script. You can use the ATAPI device with CacheCDFS, or most any other CD File system, such as Commodore's 3.1 CD Filesystem, or AmiCDFS, AmiCDFS221.lha, Martin Berndt's shareware CD-ROM filesystem. I was unable to test it with AsimCDFS, but judging by the flawless performance under the three CD filesystems I did try, I foresee no difficulty.

One thing you may have to do is replace the "SCSI.device" line with "atapi.device" in the CD0 mountlist in DOSDrivers. This is handled automatically for CacheCDFS, but may require manual editing with other file systems.

Figure 2 is an example of the FindCD util and Figure 3 is an example of the CDFSPrfs. Both are included with CacheCDFS.

The Fun Stuff

Once you have the hardware and software installed, you will find a wealth of cool stuff at your disposal. One of the neat things you can do is play Music CDs while working on your Amiga. Unlike some computers, the Amiga is perfectly capable of playing music CDs while multitasking all your other programs. Both CacheCDFS and AmiCDFS come with nice CD Audio players. See Figure 4 for Boris Jakubaschk's MCDPlayer, bundled with AmiCDFS.

You can also play at least some of the CD32 games, with a separate CD32 emulation package (the ATAPI device author has written one, and Cronus also offers CDBoot, which should work as well).

And of course, you will have access to clip art collections, fonts, 3D Objects and textures, images and

animations, and well, the list goes on and on.

Final Words

Sadly, adding an IDE ATAPI CD-ROM to the A1200 cannot be considered plug and play. To be fair, many hard drives may work perfectly with the 1200 and a CD-ROM, though I was able to test only my hard drive, which has problems with two IDE devices. With the hassle of getting or making a cable, and the compatibility issue, you may find it well worth the extra money to go with a SCSI device. If you don't mind (or even relish) the extra challenge involved, or SCSI is not an option for you, then the ATAPI CD-ROM may be just the way to go.

Contact:

ATAPI device, CacheCDFS, CD32-
Emulator
Oliver Kastle
Hirsch & Wolf OHG
Mittelsr. 33
56564 Neuwied, Germany
Tel.: ++49-2631-83990
Fax.: ++49-2631-839931

or
NBG-USA, Inc.
482 Holly Ave.
St. Paul MN55102, USA
Tel.: ++1-612-2909447
Fax.: ++1-612-2909449

AmiCDFS
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m_berndt@wanderer.dssd.sub.org
E-Mail International:
m_berndt@wanderer.gun.de

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E-mail: h27@aarhues.dk
IRC: Slammer@amiga



Figure 4: MCDPlayer, Audio CD Player.

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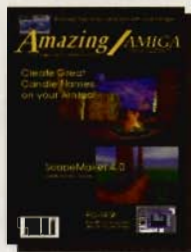
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Volume 11, Number 3; March 1996

New Products & Other neat stuff, TelevEyes/Plus from CeV Design, a new Amiga SX, a CDROM just for A1200/A4000 owners, a CD-ROM of commercial titles, all Kara Fonts on one CD ROM, plus a new Web site from MegageM.

PC-TASK, A software utility to run PC software on an Amiga. The Amiga OS is still superior in numerous ways but we are still required to deal with the MSDOS computing community, reviewed by Marc Hoffman.

ScapeMaker 4.0, Combine the power of Digital Elevation Models from Vista Pro with the abilities of other programs to create your own 3D virtual worlds, reviewed by Shamms Mortier.

On-Line, Putting AMosaic to work on the World Wide Web, learning protocols, searching the hot new web sites, hints and tips, and more in this month's column, by Rob Hays.

Creating Candle Flames with Imagemaster and Aladdin 4D, Imagemaster is a program that has a durable history of innovative image processing techniques.

Amiga in Business: Easy Ledgers, The debut of this new column features a review of an accounting package that would make any bean counter look twice.

North American Amiga Dealer List, Check the current list of Amiga specialists and dealers in this issue.

Personal Commentary: What Trees do they Plant? Shamms Mortier asks us to do more than use our computers—make a difference.



Volume 11, Number 4; April 1996

New Products & Other neat stuff, New Productivity CDs, Specialized Speech Utilities, A New Amiga Game Company, and more.

Amiga Atlanta Inc., Amiga Atlanta Inc. celebrated its 10th anniversary with a celebrity banquet. Discover how this Amiga users group attracted attention from Amiga notables, television celebrities, and the Governor.

Creating Artwork with ImageFX, Alter your photographic images so they appear as if they were created by the hand of a master artist and not the camera, reviewed by Shamms Mortier.

Cinema 4D Object Sculpting Techniques, Explore object sculpting and creation options,

how they work, and the unique objects that they can provide, reviewed by Shamms Mortier.

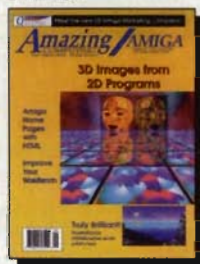
Web Typesetting Part 1: Introduction, Discover the tools available on other platforms and what you can do with your Amiga to begin creating Web pages on the Internet, by Randy Finch.

Termite 1.1, Has Oregon Research created the ultimate Amiga telecommunications program or have they just come close? by Rob Hays.

On-Line, Comparative shopping for the best on-line services with cautions, by Rob Hays.

Petro Tyschtschenko, ESCOM announces record losses. Amiga Technologies changes distribution structure. One man is in the center of all this activity to keep Amiga strong, spend and afternoon with AT's top exec.

Hot Amiga Web Sites, From Eric Schwartz's animations and graphics to web information guides, check out what other Amiga users are doing on the internet.



Volume 11, Number 5; May 1996

New Products & Other neat stuff, Nova Design acquires Aladdin 4D, SofTalk Programmer kit available, 'Professional' 3D glasses, and much more.

DPaint Tiled Backdrops, Creating 3D space in a 2D environment. Among its specialized features, DPaint has intuitive tools for creating perspective tiles. Learn how to utilize one of the hidden talents of the Amiga's well known paint program, by R. Shamms Mortier.

A Truly Brilliant Idea! TrueBrilliance's capacity to address and incorporate ANIMbrushes gives it another plus as a tool for the creation of digital artwork on the Amiga, by R. Shamms Mortier.

On-Line, Amiga multitasking advantages and three new Web programs: AmiTCP/IP, IBrowse, and AWeb. Learn how to maximize the best feature of the Amiga while you are working on-line, by Rob Hays.

This Old Workbench Episode One, Tired of a lackluster performance from your current Amiga WorkBench? Try the techniques and programs in Dave's new series, by Dave Matthews.

Web Typesetting Part 2: Basics, Creating a Home Page with your Amiga requires a little knowledge of the intricacies of HTML, by Randy Finch.

An Interview with QuikPak's David Ziembicki, Amiga Technologies has selected a new sales organization for the Amiga in North America. Meet the person chiefly responsible for marketing the Amiga as well as developing future Amiga markets on these shores in this AC Exclusive.

Web Warning! The same Home Page can yield decidedly different results. Start creating a Web page with the Amiga that everyone will be able to read.



Volume 11, Number 6; June 1996

New Products & Other neat stuff, Amiga Internet Starter Package for Canada, Personal Paint for the Internet, new Sample Wrench Sound Editor, five new CD's from GTI GmbH, and more.

NAB '96, The National Association of Broadcasters held their annual event in Las Vegas, but the Amiga is slowly disappearing from the show floor, by Don Hicks.

Travel Through the Digital Universe, Learn about people, astronomy, spacecraft, astronomical terms, constellations and stars through this CAL (Computer Assisted Learning) program from SYZYGY Research and Technology, Ltd., by R. Shamms Mortier.

DPaint Morphing, Although not as advanced or controllable as the high-priced morphing programs, DPaint offers Amiga users unique and exciting alternatives in their morphs, by R. Shamms Mortier.

On-Line, Use client programs to bypass obstructions and ease your way on the Internet, as two shareware programs, Gui-FTP and WebMaker, are discussed, by Rob Hays.

This Old Workbench Episode Two, The Workbench as art: personalize your work area with backdrops, icons, and menus. In this episode is covered the GUI aspects of Workbench renovation, by Dave Matthews.

VIScorp Buys Amiga Technologies, VIScorp is purchasing Amiga Technologies and will be working with Amiga interests all over the world. Read what the executives of this Chicago firm have had to say so far to the Amiga community.

Web Typesetting Part 3: More Basics, Your home page is only a few keystrokes away with these HTML code samples in your documents, by Randy Finch.



Volume 11, Number 7; July 1996

New Products & Other neat stuff, GVP has a new home, Amicom introduces a new web installer, Blitz Basic is back, Paxtron has Amiga parts, Shamms Mortier introduces Grafx Tidbits, and more.

Non-linear Video on a Budget: V-Lab Motion & Movieshop 3.2, Can't afford the high priced video systems for non-linear editing? The answer may be the V-Lab Motion and its new Movieshop 3.2 software, by John P. Jackman.

Fun with Lyapunovs, Create 3D environmental terrain models from the chaotic graphics of Lyapunov space. They are a class of fractal associated algorithms used to visualize a specific condition of fractal space, by R. Shamms Mortier.

Amazing Symmetry, Textured tiles are extremely easy to create and offer the digital artist a few very interesting opportunities. This tool, embedded in DPaint, will help in your obsession to find newer and unique textures, by R. Shamms Mortier.

On Line, Travel the internet with the newest Amiga browser, Voyager 1.0, and discover more excellent Amiga web sites, by Rob Hays.

JAZZ.BIT 96, Why is a major computer art competition held in Finland? An interview with Martin Keitel, the arts manager of JAZZ.BIT 96, interviewed by Marc R. Hoffman.

Amiga Wars, There is a battle for the Amiga user raging on the internet between old and new Amiga firms and a few others. For a system many have tried to write off, the Amiga is attracting a lot of interest.

Web Typesetting Part 4: Publishing & Tables, How to get your beautiful Home Page on the Web for the world to see. Also, delve into one of the most popular additions to the HTML 3.0 standard known as tables which allow data on a Web page to be structured in a row and column format.



Volume 11, Number 8; August 1996
New Products & Other neat stuff, VISCORP reaches Amiga Technologies agreement, Cronus distributes new CDs for Developers and more, Sony Electronics releases DKC-ID1 Digital Camera, World Construction Set Version 2, and more!

ImageFX 2.6, The Amiga's premiere graphics manipulation tool has just taken a quantum leap in abilities, reviewed by R. Shamms Mortier.

An Interview with the Nova Team, Amazing's Graphics reporter and admitted ImageFX and Aladdin 4D addict discussed Nova's current plans with the Nova team, by R. Shamms Mortier.

Amiga Handshaking, The Amiga's IFF standard allows users to utilize the best of several different programs to create a unique image or animation, by R. Shamms Mortier.

On Line, There is a mountain of powerful software in the Aminet collection. Protection for your SCSI and IDE hard drives as well as a better CD-ROM OS utility which includes unique audio CD ROM capabilities are just a few, by Rob Hays.

POV Ray Tracer 3.0 Sneak Peak, Persistence Of Vision 3.0 is now in beta testing. Discover the new tools and features as well as learn where you can try it out for yourself, by Dave Matthews.

Amiga Wars Part 2, Amiga Technologies is sold to VISCORP as pios and phase5 continue to jockey each other for market and negotiating positions.

Olafson's Guide to Amiga Baseball, Tired of

the nation's pastime passing you by? Peter has composed a list of some of Ami's times at the plate that you can find from dealers, Amiga swap meets, and maybe in your own library.

Web Typesetting Part 5: Forms, Creating forms on your web page is incredibly easy and the information gained can help you build a better page, by Randy Finch.



Volume 11, Number 9; September 1996
New Products & Other neat stuff, New Amiga business software, a new Aminet collection, and the Amiga is seen working at the Olympics!

The Not At All Complete Graphics CD-ROM Compilation Digest, There is a world of possibilities in every graphic CD-ROM, by R. Shamms Mortier.

Cinema4D Animation Tutorial: Part 1, Although AC will stick to the basics, don't think that Cinema4D is capable of anything less than a professional application.

Cinema4D is capable of Keyframe, path, hierachial, inverse kinematic, and special FX (explosions, melts, and more), by R. Shamms Mortier.

On Line, Frustrated with your attempt to connect to the Web? Try a trip to Miami, by Rob Hays.

Web Typesetting, Part 6: Reading Form Data, Catching user information from your web site, by Randy Finch.

This Old Workbench, Part 3 Compression on the Amiga, Create needed space on your Amiga on-the-fly, by Dave Matthews.

Make Do With What You Got, In art or in life, it is not always how much you have, but what you do with it, by R. Shamms Mortier.

ESCOM Dies The Amiga Lives! Hear the behind the scene story from the two main characters, Petro Tyschtschenko of Amiga Technologies and Bill Buck of VISCORP.

Gold From 1990? What does this array of equipment from 1990 have to do with current events? The Amiga's influence is continually being felt.



Volume 11.10; October 1996
New Products & Other neat stuff, New Game collections, printing solutions, Amiga software repair, backup software, designer software, and more.

The Gothic Church: Part 1 A Tutorial in Aladdin 4D, Tired of the prominence of futuristic themes in 3D design, then take a look at this first part in a series of tutorials

explaining the process of modeling in a 3D setting that evokes the past, by Charles F. Cavanaugh.

FinalWriter 5, Each release of FinalWriter has added new tools and techniques to its abundant reservoir of options, and release 5 is a very major upgrade that adds a whole list of enhancements, by R. Shamms Mortier.

On Line, Join Team Amiga, fix old games to play again on your upgraded Amiga, find old friends or classmates, and more, by Rob Hays.
This Old Workbench, Episode 4: Just when you thought it was safe! Our intrepid adventurer has discovered even more ways to improve (or at least confuse) your WorkBench screen, by Dave Matthews.

Web Typesetting, Part 7: Using Form Data, Getting your data from your web site. Plus, a look at several reader's sites from the web, by Randy Finch.

Amiga Convention '96 Montreal, Canada was home to the Amiga once again as Dealers and Developers met with hundreds of Amiga users.

ASIMware has released PhotoCD Manager for the Amiga, See what our resident artist has to say about this and other applications to help Amiga work with Mac & Win resources.



Volume 11 Number 11; November 1996
New Products & Other Neat Stuff, SoftLogik announces both PageStream 3.1 and 3.2, Amiga Fest '96 planned for Toronto, Checkbook Amiga, and more.

Cinema 4D: Tutorial #3 Basic Keyframe Editing, Shamms uses some of Cinema 4D's object design and texturing tools to begin a dedicated look at its animation options.

The Gothic Church: Part 2 A Tutorial in Aladdin 4D, In this installment, Mr. Cavanaugh shows the Amiga user how to produce stained glass windows to rival the masters.

Real Chaos and the Computer Artist, Musings on a Muse, In computer art, a pinch of chaos in the recipe is the spice of a creative and worthwhile adventure.

On Line, A quick comparison of some of the Web authoring tools available through shareware.

Web Typesetting, Part 8: Image Maps, Create images that, with a few clicks of a visitor's mouse, make your home page truly interactive.

PC2Amiga: Connect Your Amiga and PC, Finally a way to use those clunky old MS DOS machines. PC2Amiga allows you to mount your PC as an Amiga device.

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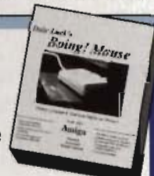
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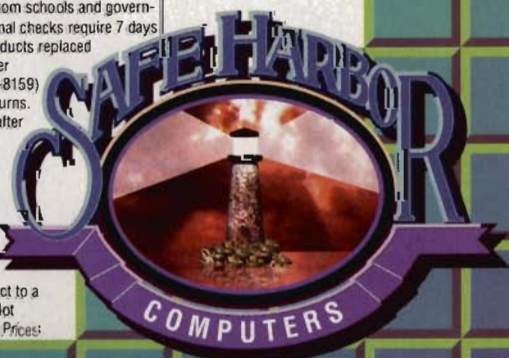


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This Old Workbench: Episode Five

Renovation from the ground up!

What would you want in a new Amiga Operating System?

by Dave Matthews

Up till now, this series has covered sprucing up the Workbench and Amiga Operating System (OS) with available utilities, patches and hacks. But what about the future? In this article, I would like to present a few of my ideas for the next generation of Amigas. This is in no way connected with VISCorp, PIOS, Phase V or other parties, living or dead, and any resemblance thereof is purely coincidental. I have also included an updated idea for a tower case for the PowerAmiga.

All the Workbench "screenshots" were created using Personal Paint, Brilliance, and ADPro, using ideas from Workbench (along with 3rd party Workbench enhancement programs) as a base. The tower design was produced in Aladdin4D.

Many of the ideas presented in this document have already been accomplished, either on the Amiga or other platforms, so I make no great claim to originality. These suggestions may be unpopular, unlikely, unworkable, unwise, illegal, immoral, fattening, or just flat out wrong—hey, I'm taking a shot in the dark on some of this! My goal is to stir up discussion rather than create the perfect OS, though I would surely love for this to be MY next Amiga!

AMIGA OS 4 for PowerPC

"Is this over the top? I can never tell..." -The Riddler, Batman Forever

First of all, it should exist! I feel strongly that there should be a new generation of Amiga, new hardware and new OS. I also feel that "There can be only one!" (with apologies to The Highlander). I'm all for Amiga clones, but without a single unifying vision, the power and elegance of the Amiga will end up scattered to the winds.

General

What else? A new OS should be fast, responsive, optimized, and lean. It should also be object oriented, retargetable, hardware independent where feasible, but able to use whatever hardware exists (processors, video cards, etc.) to full advantage.

The OS should start with a tightly written kernel (Amiga OS Lite, comfortable in a 4MB system) which supports the basic features like multitasking and memory protection, while allowing the more advanced features, multiprocessor, networking, etc. to be added in a professional upgrade. The Lite version should be fully upgradeable to a pro version, assuming sufficient resources (memory, Hard Drive space, etc.) exist.

There should be support for extending ROMs beyond current size limits as well as emulation for earlier 680x0 software. The OS should be able to emulate 1.3-3.1 OCS/ECS/AGA at least tolerably well, particularly with well written applications. However, in all fairness, present and future performance should not be compromised to do this.

Don't forget preemptive threaded multitasking.

There must not be an OS limit on the amount of RAM accessible. Any OS should be able to use all or almost every byte a CPU can address.

Memory protection—no application should be able to bring the system down. No application should be able to interfere

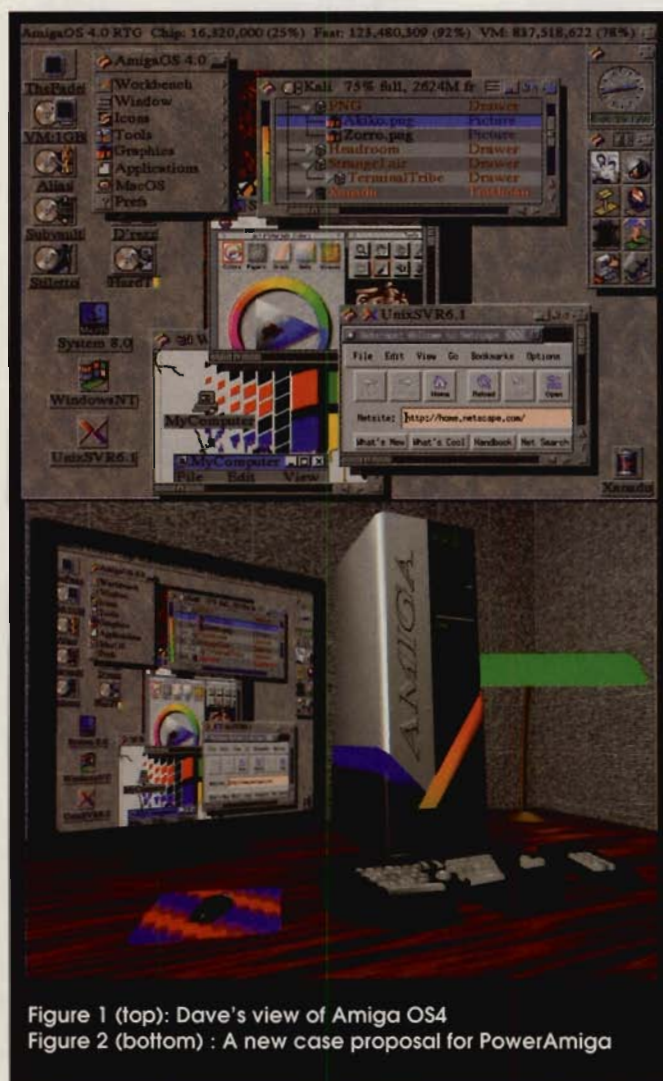


Figure 1 (top): Dave's view of Amiga OS4

Figure 2 (bottom) : A new case proposal for PowerAmiga



Figure 3 (left): The new ASL filerequester

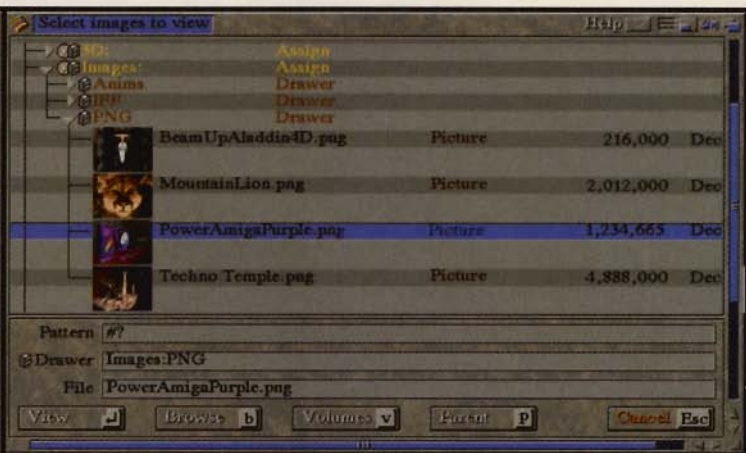


Figure 4 (right): Picture browsing

with another application, its resources (memory, etc.), or cause it to crash.

How about a built-in ability to uninstall programs? Is it possible to give the computer the ability to remove errant programs and free resources, memory, screens, windows, file locks and more? This alone would place us leaps above any current Windows OS.

The system should be able to gracefully "defrag" memory, or avoid fragmented memory altogether. Memory pools?

Resources should be extendable "on the fly." Unlike the Mac (or ADPro), a program should be able to request more memory and get it (if available).

Virtual memory (this is the ability to use the hard drive space as extra RAM). No OS limit, if tetrabyte hard drives become available, Amiga OS can use the entire tetrabyte for virtual memory.

This is a good place to talk about chip RAM. Why not allow any RAM to be addressed as chip RAM, and any RAM as fast RAM. Normally, you would have (say) 4MB of VRAM for video, and however many MB of fast RAM. If you needed more chip RAM, and had free fast RAM, you could tell the OS to 'change' some of the fast RAM into chip RAM. This would be best if it could happen on the fly (no rebooting). The new chip RAM would appear to the system as real VRAM (only probably slower). Likewise, if you were not using all your VRAM, and you needed an extra meg or two for a huge program, you could hijack some of it.

Symmetric Multiprocessor Support

The system should accept and use multiple processors (up to 64000 8-). Ok, maybe the world is not ready for massively parallel Amigas, but the Amiga certainly should not be hard wired for only two or four. This should also include distributed processing, where the OS

shares processor load over a network of machines, local or otherwise.

Integrated networking, peer to peer or client/server, tcp/ip—the Amiga should be able to access network resources, hard drives, printers, even FTP and Web sites as naturally as local resources. This should have multi-user support as well as security features.

Why not an optional "Wintel" (any OS which will run on an Intel box: Windows 95, NT, OS/2 Warp, Linux), MacOS, Unix (XWindows, Motif, NextStep), or future OS support? The Amiga OS could act as a virtual machine and pseudo network, with the capability to run multiple platforms simultaneously. All the resources could be shared among the OSNet, including hardware—multiple CPUs (if available and SMP supported), memory, hard drives, printers, modems, video and monitors, etc.—and software: clipboards, filesystems (read/write Amiga/Mac/PC disks from any platform), handlers (for instance XPK/XFH style compression on any platform), datatypes (OS handles conversion to loadable file format for any applications), etc.

How about the ability to launch programs on any platform from the Workbench? If an application is for the Mac, Amiga OS will Boot the MacOS (if it is not already running) and then launch the program. By adding this feature, as well as the ability to run multiple operating systems, the Amiga will have no limit on its possible markets.

Visual ARExx, interprocess communications (including other OS if they support Rexx), extensive Macro facilities, including on-the-fly macro recording and menu driven "visual" macro/rexx programming. Use this in a standard installer, so experts can plan out installation in advance, and control the process to their hearts content. Also, within the installer could be a built-in uninstall with

ability to scan the system for files which should not be removed as well as orphan files, libraries, etc. Files to be uninstalled could either be deleted or archived.

Object Oriented, extended datatypes style document sharing, including Acrobat/Common Ground style bridging for font, stylesheet, graphic, sound animation, 3D format, text format, etc., between all applications and platforms should be included. There should also be full support for IFF32, PNG, JPG, ANIMS, MPEG, QuickTime, most sound formats, etc.

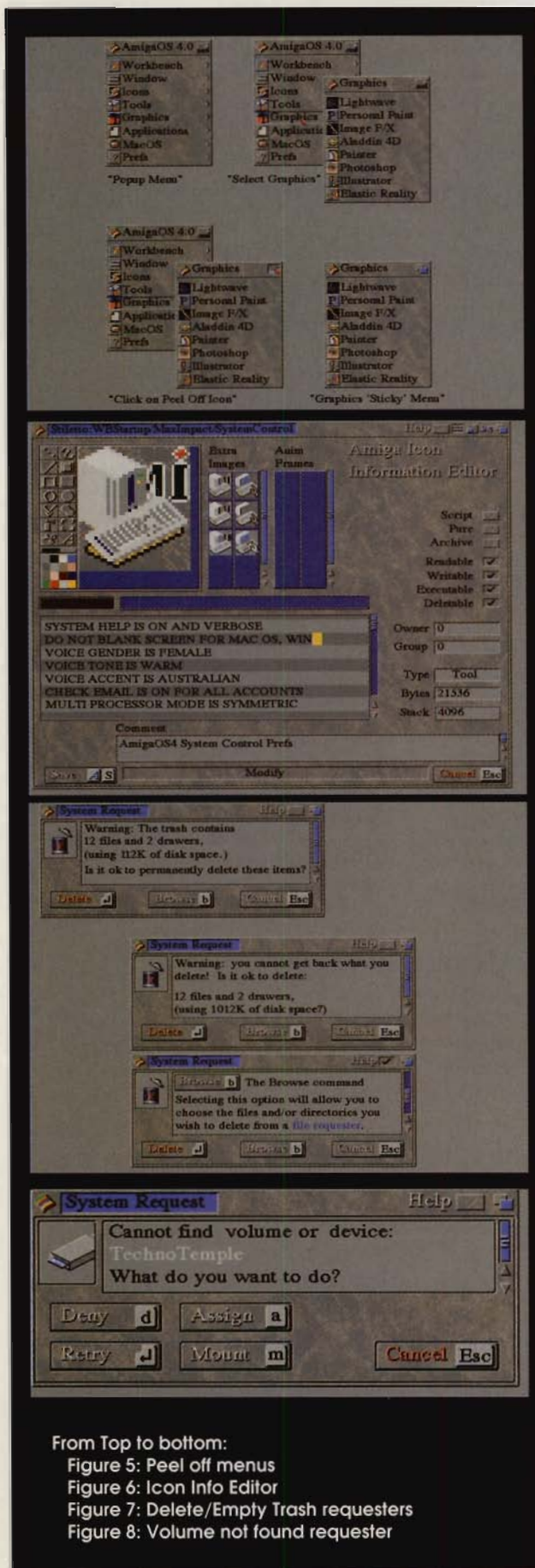
The Amiga is definitely an international computer. Therefore it is paramount to have better localization to make it easier to customize the system for different countries. This means that a system or standard must be inherent in the OS to anticipate the difficulties between languages before someone needs to translate their software and not afterward.

The new Amiga OS needs a more powerful shell, better editing, menus, open on screen, scroll-through history buffers, and better cut and paste editing. By the way, please add cut and paste to all text requestors.

The OS should include Postscript, Truetype, Compugraphic and Bitmap 32 bit color fonts. Why not a clipboard with a history feature, visual browsing, datatypes? How about system wide notification (when files, icons, screens, etc. are changed).

Set the Internet world on its ear, change AmigaGuide to HTML 3/4, etc. and attract a completely new market area. This should include full HTML On-line with a context sensitive multimedia help system.

Don't forget three button mouse support. I believe there should also be a provision for multiple boot configurations, including multiple WBStartups, preferences, etc. And why not a more



From Top to bottom:
 Figure 5: Peel off menus
 Figure 6: Icon Info Editor
 Figure 7: Delete/Empty Trash requesters
 Figure 8: Volume not found requester

complete Early Startup with more advanced system control (CPU, memory, video, etc.) plus the ability to work with any monitor available?

File Systems

Make File Systems faster with no limit on partition size (or at least no less than a tetrabyte ceiling). Allow full support for standard high density floppies, at full speed. (Probably more of a hardware thing). Include better error handling. The new OS should be able to map out errors and format bad floppies.

Let's include better and faster handling of alien file systems, particularly, less annoying gronking while the system tries to figure out what kind of disk has been inserted. There should also be less thrashing when operating on multiple floppies (also probably more of a hardware thing).

How about better control over small hang-ups? When saving a file to a floppy, and an error occurs, the OS should be able to completely cancel the operation and not just the current block.

The Amiga OS would be greatly enhanced if we could include Integrated XPK/XFH style 'on-the-fly' file compression as well as a better backup program, with 'cron' features and XPK compression, support for all removable media, floppy, tape, zip, etc. What about drive mirroring and RAID support, striping data on multiple drives?

We will need support for all SCSI 2, 3, fast, wide whatever, IDE, EIDE, IDE-2, HDs CD ROMs, Zip, 120MB floppies, etc. It should be easy to add new types of hardware without ROM upgrades. And let's not forget anti virus support as well.

Graphics User Interface (GUI)

First of all, there is a fine line between an interface that is beautiful inside and out, and one that is just pretty to look at, but horrible to use. While I think that a 100 MHz 603e or similar processor can handle all my ideas, without being bogged down, I think it's important to avoid the Mac 'do it our way or no way at all' paradigm. (Aggggh, I said the paradigm word, I hope Dilbert isn't reading this!) Let the user decide where that fine line is. Thus, the Amiga GUI should be customizable to fit each user's needs, from shell-rich/minimal graphical maximum resource available to a full blown 32-bit color animated singing and dancing, vertigo inducing multimedia spectacle.

The user should be able to do almost everything in shell that can be done in GUI, and vice-versa. Of course, multiple screen support, including the famous Amiga ability to drag screens up and down!

Why not multiple monitor support, full multitasking for all Workbench operations, including drag-n-drop copying, etc. and 32-bit color Workbench with real palette editor? Should we license 32 Quickdraw or make something better? The new system should provide a wealth of very efficient standardized GUI resources for programmers.

The icons should be completely redone. They should contain palette info, and should be remapped to look good no matter what palette or how many colors are being used. It might be nice to be able to add multiple images for different resolutions and colors. What about adding animation capabilities to the icons instead of just two frames. Borders should be optional (or just eliminated). The icons should be able to have transparent areas (color 0 perhaps).

Icon information should have an integrated text editor to edit tool types, as well as a full featured icon editor. There should be more extensive 'fake' icons, images, fonts, text, etc., like DefIcons, only with prefs editor, etc. They should be able to learn new file types. You could design the system so that you could use Icon Info on a fake icon, save and voila, a real icon.

Why not more view by options, including viewing of 'info' files? View dirs first in "view by name windows". Let's customize colors for icons (text version of fake icons file recognition), dirs one color, text files another, picture files another, etc. Why not have Mac/Window style dir trees, including connecting lines to clarify

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relations? We should have 'small' icons to
identify dirs, hard drives, assigns,
projects, tools, pictures, etc. There could
be option 'striping' alternate lines with
different shades to differentiate lines.

While on the subject of icons, let's
not forget about better icon 'clean up.'
Why not add a snap-to-grid feature, etc.?

All window gadgets should be
customizable, as well as borders, drag
bars, etc. Users could also control where
gadgets were placed (add scroller arrows
on both top and bottom, left and right for
instance). Windows should feature
animated opening and closing, "ex-
plode", "fade in/out", "Warp in/out", etc.
As with icons, windows should be able to
have transparent areas. Windows should
have an option to be iconified. You
should also be able to snapshot a window
in both min and max sizes. How about
the power to snapshot any window in
any view mode no matter what mode the
parent is in? Windows could also be
moved and sized using opaque, transpar-
ent or outline mode.

Customizable menus, MagicMenu
style popup, plus peel off and pull down
menus would add a great deal of visual
excitement. Let's add graphics to menus,
including icons for menu items and
image backdrops. Menu items and
shortcut keys should be configurable.

Also, you should be able to turn a menu
off if you want the extra screen real
estate.

There could be integrated docks,
text, graphical, animated. Consider
banks of docks stored in rotating 'lazy
Susan' style, so access to multiple banks
is easy. We could also save integrated
prefs "suites", including screen modes,
fonts, backdrops, docks, menus, etc. that
could be changed completely with one
mouse click.

Please, no rotten "Please close all
Windows except Drawers" requestors
when changing screen modes, thank you
very much. In a like vein, changing fonts
should not cause all the icons to scrunch
up in the corner.

One item I believe would be most
noticeable on the Amiga is an animated
pointer. An animated pointer could be
developed for both normal and wait/
busy states. What better way than to
dramatize the Amiga's inherent superior-
ity in animation than with its own special
pointer?

File requestors must have all view by
name features plus both shift and rubber
band select for multiple files. The Preview
option could generate a small preview of
the graphic. A system "browse" would let
you open a small window to look at
graphics, text, fonts, sounds, (right, you

can't look at sound, but you could listen
to a portion!), etc.

In a new system, all requestors could
have more than one row of buttons,
including those generated by
requestchoice, etc. There could be a GUI
generator for shell tools. AmigaDOS and
ARexx scripts, could be able to parse all
the available args and create a nice GUI,
including saving an icon.

One major advance and a primitive
strike toward the voice recognition and
even the Artificial Intelligence markets
would be better speech synthesis. This
should include the ability to "speak"
requestors as well as the ability to read
English and other language text. Speech
should be customizable for language,
accent, quality, and tone as well as
gender. It also should be capable of being
very human sounding. Speech recogni-
tion, as soon as the technology gets real,
would be an extremely important
addition to the Amiga's OS. In fact,
include OCR (Optical Character Recogni-
tion) and you have the ability to read text,
and possibly even the ability to learn how
to pronounce words correctly.

Hardware Issues

I'm not going to be overly specific
about hardware, just some general
notions. The most important point is that

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it should be very modular. CPUs, BUS, IO, etc. should be plug in, and plug-n-play. The basic motherboard design should be very clean and uncomplicated. Memory should be placed on a CPU card or a RAM card, not on the Motherboard. Use surface mount devices when reasonable, but not on any chips which are likely to be replaced or upgraded such as IO controllers, CPU, etc.

These days there are three words which define the abilities of a system—bandwidth, bandwidth, bandwidth! It doesn't matter how fast the processor is if the architecture can't handle high throughput. Remember, don't push EVERYTHING though the CPU use coprocessors when they would be more effective. I believe we should support PCI, and be prepared to support faster, higher throughput enhancements when required. The I/O should support standard off the shelf PC style floppy drives. Of course there should be faster serial and bi-directional parallel ports.

While support for PCI video cards is good, a custom 'chip set' (on a PCI card) would almost have to perform better. Almost all current PCI video boards are specifically tailored to the 'Wintel' architecture. I don't think you need to design the graphics/sound chips themselves (the PC market is rife with

excellent video processors), but the Amiga's video subsystem should be put together with the Amiga in mind. This card should be full 24-bit with resolution of up to 1280x1024 non-interlaced 24 bit or higher and have both multisync 31Khz and high quality SVideo/composite out. Of course, it should be very fast, support 3D rendering, and maybe MPEG2 video.

All of this should be feasible (and relatively cheap) with mainly off the shelf chips. Every consumer Amiga should ship with this card. Vertical market boxes could be shipped with the basic video card and/or with some other video card suited to their need. This would give game and video developers a high performance video standard to write to, while still giving the Amiga all the benefits of retargetability and access to plentiful PCI peripherals.

Price is always a part of the equation and we should work toward continually reducing production costs. We need to constantly refine each Amiga system to make it cheaper to build, more reliable, and easier to repair or upgrade. Please note: cost reduction is not an excuse to use inferior parts or assembly practices! Quality has to come first.

Basically, the core hardware should be nimble enough to keep up with improving technology (without a complete redesign every two years), flexible enough to use the cheap and plentiful PC peripherals, and powerful enough to outperform competing systems. Also, a laptop or notebook would be nice.

Applications

The Amiga desperately needs big name applications, if you want to sell beyond the faithful. Toward this end, first, tout the fact that Amiga can run Mac and Windows applications, and sell lots of Amigas in those markets.

Second, create powerful and easy to use cross development tools. Then (hopefully after the profits start trickling in) start a full scale campaign to port and create new Amiga applications. Every Netscape, WordPerfect, Lotus, Photoshop, Snappy, etc. ported to the Amiga means access to another group of people who will now consider the Amiga, since they can run their favorite program. Mention the fact that Microsoft is NOT porting to the Amiga, so Netscape, Lotus, etc. will get a head start without having to compete with that 800 pound gorilla.

Marketing

Sign. This topic is such a fairy tale, I'm not sure I even believe it exists. First, it is probably not possible to compete with clones pricewise. But, every effort should be made to market an affordable

'consumer' level Amiga system (MPC603e, 4MB fast RAM, 2MB VRAM, AmigaOSLite, hard drive, CDROM, monitor, decent software bundle, under \$2000) as well as high end workstation level machines, where the sky is the limit.

Secondly, please advertise in the Amiga mags, and in related vertical mags like 3D, computer graphics, multimedia etc. Be specific, i.e. don't advertise gaming features in computer graphics publications. Advertise in Byte, PC Magazine, Mac World. Get the Amiga reviewed in PC and Mac magazines. And keep it up, every month. In short, get the Amiga name out there.

Your Input, Please!

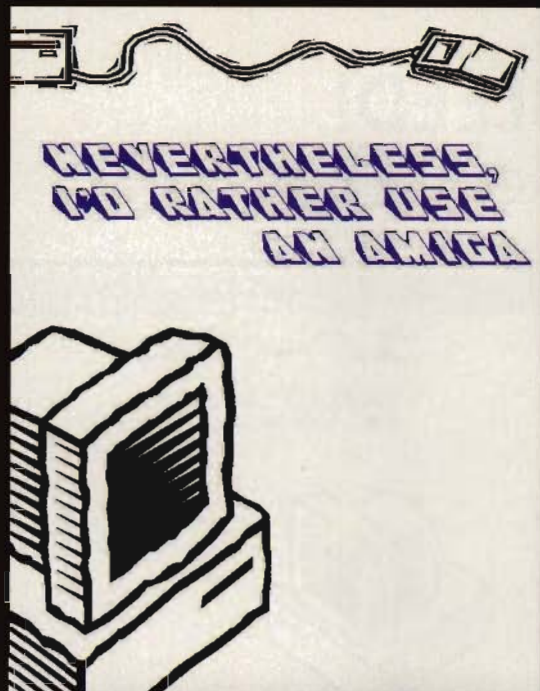
That's about it for now. Whether you agree with my thoughts here or not, I hope you found them interesting enough to spark a few ideas of your own. Comments, accolades, dissents, flames are welcome. If you have a better idea, and I am sure you do, the readers of *Amazing* would like to hear about it. You can contact me via email at: dm05438@navix.net or by snail mail at AC's address below.

•AC•

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(continued from page 48)



border around the entire page.

There is a workaround if your desktop publishing program or word processing program will output scaled pages. For example, PageStream 3 has such a function in its Printer requester; PostScript printing from other programs, such as SoftWood's FinalWriter, can also be scaled.

In PageStream's case, input 91 percent in the Scale gadget. Print it out. If you are using a professional printer,

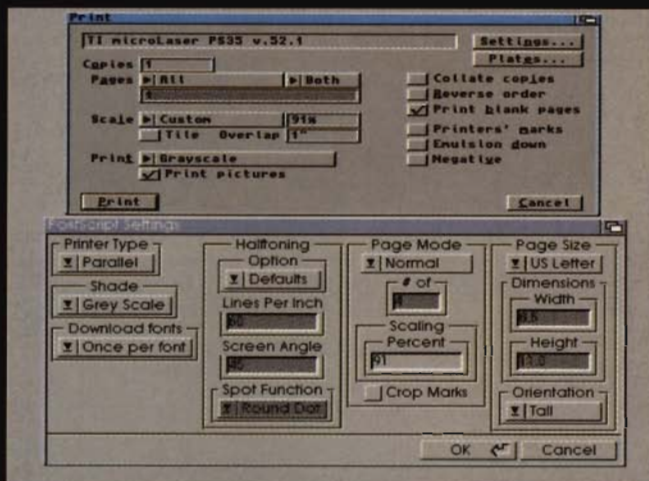


Figure 3: (left) Along with clip art, words and blocks of color can also be used as bleeds.

Figure 4 (right): Here's the trick: scale the page's output to 91 percent. PageStream 3 (top) scales output for all supported printers. If you own a PostScript printer, scaled printing is available from other programs, such as FinalWriter.

ask him to shoot the page at 110 percent. The final page will end up as 8-1/2 by 11 inches with your bleed in place.

A photocopier can be substituted for a professional print shop. Print out your page at 91 percent of the original size. Place the original in the photocopier as you normally would. Set the copier's enlargement control to 110 percent and press "Print." The copy will have the bleed in place, then use the copy as your master for additional copies.

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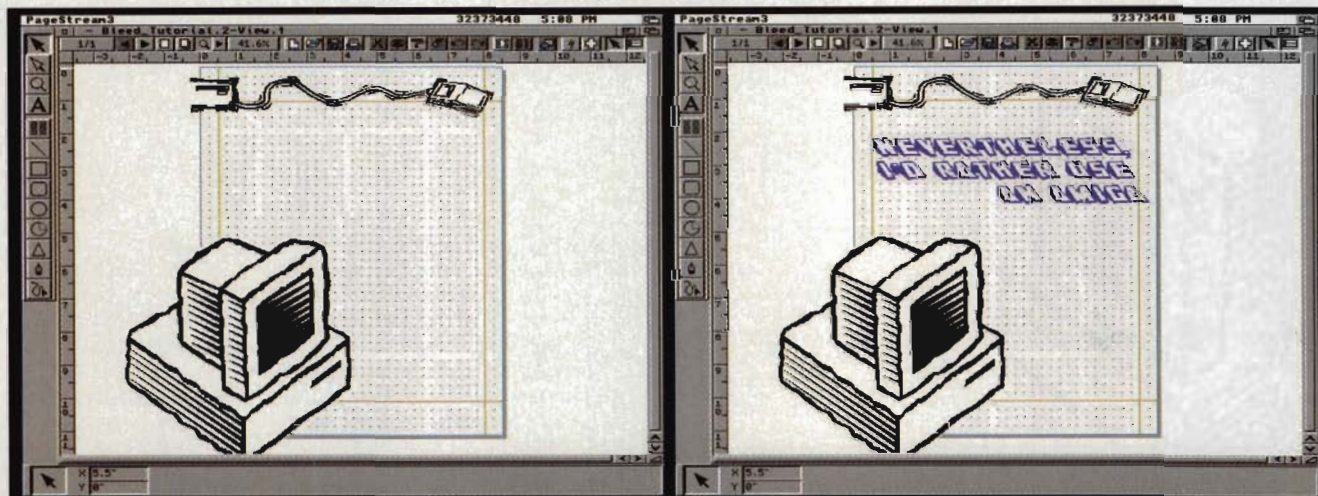


Figure 1 (left): The computer graphic in the lower left corner has been positioned to bleed off the page.
Figure 2 (right): An appropriate message is added.



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Circle 105 on Reader Service card.

Incorporating large clip art as a design or background element creates impact and adds interest to a page. "Bleeding" clip art, or positioning the graphic so that a portion lies off the page, gives the impression that the subject is simply too "big" to be constrained by the page's boundaries.

The technique to print bleeds is simple enough, but requires a workaround if the services of a professional print shop are not in the picture. Soft-Logik's PageStream 3 was used for this example, but any desktop publishing program or word processing program will do if it imports clip art and, more importantly, scales output.

Step One:

Place your clip art on the page. Enlarge it and position it so that a portion "bleeds," or spills, off the page. Keep a couple of things in mind when working with large pieces of clipart. Bitmapped graphics, such as IFF, PCX, or TIFF, may become "blocky" and jaggy if they are significantly enlarged. The size of vector graphics, such as PostScript's EPS format, can be modified without any degrading of the image. However, beware: large complicated vector graphics can suck up large amounts of printer memory.

Step Two:

Add your text, headlines or color as needed. Now the tricky part. When you are ready to print, you will run smack into a hardware limitation. Namely, most laser printers can't do "bleeds." In other words, they don't print to the edge of a sheet of paper, but leave about an eighth of an inch blank

(continued on page 47)

Paxtron is North America's largest wholesale supplier of Amiga replacement and upgrade chips

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